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THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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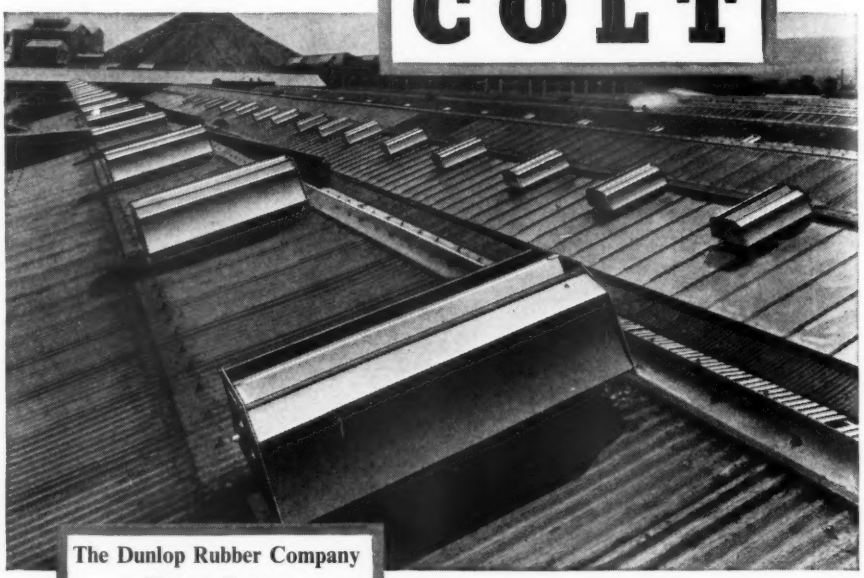

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The Royal Fine Art Commission

The following is an extract from the LONDON GAZETTE of 25 September: 'The Queen has been pleased by Warrant under Her Majesty's Royal Sign Manual, bearing date the 21st instant, to re-appoint Henry Moore, Esq., to be a Member of the Royal Fine Art Commission; and to appoint Howard Morley Robertson, Esq., M.C., A.R.A., P.R.I.B.A., to be a Member of the Commission in the room of Edward Maufe, Esq., R.A., F.R.I.B.A., who has retired.'

Christmas Holiday Lectures

The Hon. Lionel Brett, M.A.(Oxon.) [*F*], is to give this year's Christmas Holiday Lectures for boys and girls. His subject is *Designing a Town*. The first lecture, entitled *An Old Town*, will show by bird's eye views and street scenes how the old towns of Europe were designed. The second, *A New Town*, deals with the present and the future.

The lectures, which will be held at the R.I.B.A. on Wednesday 30 December and Friday 1 January, at 3 p.m., are for boys and girls of 13 and upwards. Tickets for either or both lectures may be obtained free on application to the Secretary, R.I.B.A. Envelopes should be marked 'Christmas Holiday Lectures' in the top left-hand corner.

Summer Visitors and Travel

The wet summer by no means reduced the number of architects from abroad calling at the Institute for information and assistance during their visit to this country. Judging from their enquiries, interest in the New Towns, the Royal Festival Hall and the school building programme would seem to continue unabated overseas. As usual, Australians, South Africans and Americans predominated amongst the visitors, but for the first time since the war there were also numerous Germans. During August the Institute entertained a party of 20 German architects drawn mostly from the British zone of Germany.

It is perhaps regrettable that so many visitors are content to limit their experience of Great Britain to a few days in the capital city: only in a few cases were requests for information about architecture in other parts of the country received.

Since the beginning of May the Institute has issued 261 Travelling Cards to its members travelling to the Continent, and 10 Cultural Identity Cards. This is in addition to a large number of letters of introduction to its Honorary Corresponding Members and to foreign architectural societies.

Honorary Corresponding Member

Señor Leopoldo Artucio of Uruguay has accepted the Council's nomination as Honorary Corresponding Member.

Gifts to the R.I.B.A. from Russian Architects

At a Council luncheon on 13 October, Mr. F. R. Yerbury [*Hon: A*] and Mr. Colin Penn [*A*], members of the party which recently visited Russia, presented gifts which the Academy of Architecture of the U.S.S.R. has sent to the R.I.B.A. Mr. Yerbury presented a book of colour reproductions of Byzantine mosaics and paintings in ancient churches in Armenia. Mr. Colin Penn presented an album of photographs of historic architecture in Leningrad and a group of mounted photographs of recent Soviet architecture. Both the volumes are very large, handsomely bound and inscribed with messages of greeting signed by leading Russian architects. We intend reproducing some of the illustrations in future issues of the JOURNAL.

The Architects' Benevolent Society

The stand of the A.B.S. at the Building Exhibition, kindly presented by Mrs. M. A. Montgomery, is to be in the gallery near the entrance to the R.I.B.A. Club. The Christmas cards illustrated in the September JOURNAL will be on sale there together with copies of 'The Architect's Aid'; this is a table for rapidly computing areas of rooms and similar spaces and saves much arithmetic on the margin of the drawing board; it has been prepared and presented to the A.B.S. by Mr. Richard Henniker [*F*]. Price 5*s*. per copy.

Members are specially asked to use the A.B.S. tickets enclosed in this JOURNAL when entering the exhibition because each ticket so used ensures a donation of 3*s*. 6*d*. to the funds of the Society. Any member who mislays his ticket can obtain another on application to the Secretary, the A.B.S., 66 Portland Place, W.1.

Tickets for the A.B.S. Annual Ball on 9 December are already selling well. The price is £2 2*s*. each including supper and they can be obtained from the Hon. Organising Secretary, c/o C. J. Epril, Esq., 55 Pall Mall, S.W.1. Charles Ernesco's dance orchestra, side shows and cabaret are among the attractions.

Another Coronation Honours Award

The Institute has just received news of a further award to a member in the Coronation Honours List. This was the award of the M.B.E. to Mr. R. D. A. Andrews [*A*] for services with the Royal Marines Forces Volunteer Reserve (City of London).

The C. R. Mackintosh Exhibition in Edinburgh

Exhibition of the Work of C. R. Mackintosh

The greater part of the exhibition illustrating the life and work of Charles Rennie Mackintosh, which was recently staged by the Saltire Society in Edinburgh, is to be on view at the Royal Institute from 12 to 23 December. While it is unlikely that the pieces of furniture designed by Mackintosh will be on view, models of some of his buildings in addition to drawings and photographs will be shown. Dr. Thomas Howarth, who collected the material and arranged the exhibition, is to introduce a discussion on Mackintosh at a meeting of the Library Group on 10 December, the twenty-fifth anniversary of Mackintosh's death.

The Lisbon Congress of the I.U.A.

The British delegates report that the Congress of the International Union of Architects held at Lisbon recently was a great success. A full account, written for the JOURNAL by the Hon. Godfrey Samuel [*F*], will be published in the November JOURNAL. It was to have appeared in this issue but has been held up to include the final text of the resolutions which has not yet been received from Lisbon.

Publicity for the Profession by the R.I.B.A.

Since their issue a few months ago, 10,000 copies of *The Architect and His Work* have been issued and 50,000 copies of the leaflet *Before You Build* and as yet there is no diminution in the demand for them. Reprints will have to be made shortly. All local authorities and the major public libraries in Great Britain and Northern Ireland have received copies and already some local authorities have established the practice of handing copies of *Before You Build* to applicants for building licences. The American Institute of Architects have asked the R.I.B.A. to supply copies of the two pamphlets for study.

The Allied Societies have played and are playing a notable part in this work of collective publicity. Many of them are making it their duty to see that the publications are adequately distributed in their areas, a task obviously beyond the capacity of headquarters.

The travelling exhibition 'Home and Surroundings', at which copies of *Before You Build* are available gratis, has now been seen by 26,000 people at 18 centres and both copies are fully booked until July 1954.

The 'Home and Surroundings' Exhibition

No. 1 copy will be at York from 18 November to 2 December. No. 2 copy is concluding a series of short showings in Kent and will be at Barking from 2 to 11 November and after that at Southend-on-Sea.

R.I.B.A. Architecture Bronze Medal

The R.I.B.A. Bronze Medal for the Nottingham, Derby and Lincoln Architectural Society's area for the period ending 31 December 1952 has been awarded in favour of the British Electricity Authority's new generating station at Staythorpe, Notts., to Cecil Howitt and Partners (Mr. T. Cecil Howitt, D.S.O., O.B.E. [*F*], Mr. P. Gerrard, A.M.T.P.I. [*A*], and Mr. F. E. Woolley [*A*]).

Prospects of Architectural Employment in Canada

In our issue for September 1952 we published under the above heading information supplied to us by the Royal Architectural Institute of Canada about prospects and means of obtaining employment in that Dominion. To supplement this information, we have been asked by the R.A.I.C. to remind members who may be considering emigrating that in their own interests they should familiarise themselves with the regulations governing registration in the Dominion.

Registration is in force throughout Canada and is administered independently by each province. The qualifications and procedure necessary for registration differ in the various provinces and are linked with candidature for membership of the corresponding provincial associations. The Associateship of the R.I.B.A. does not automatically qualify for registration in Canada. In some provinces an examination in practical experience after one year's employment with a Canadian registered architect is required for registration, and it is possible that this requirement may be made stricter in the near future.

Registration in the Province of Quebec and membership of the Province of Quebec Association of Architects are restricted to Canadian citizens, and British nationality does not automatically confer Canadian citizenship. The latter is not obtained until after five years' residence in Canada.

The R.A.I.C. have particularly asked us to warn members that it is seldom, if ever, possible to arrange employment for anyone from this country by correspondence; and that applications for employment can only be considered when the applicants are in Canada.

Any member considering emigration should write for full particulars either to the honorary secretary of the provincial association in the area of which he wishes to work; or, if the area in which he wishes to work has not been determined, to the secretary of the Royal Architectural Institute of Canada, 88 Metcalfe Street, Ottawa, Ontario, Canada. The addresses of the provincial associations are set out in the R.I.B.A. Kalendar in the section headed 'The Allied Societies'.

Bicentenary Celebrations of the Royal Society of Arts

H.R.H. the Duke of Edinburgh, K.G. (Honorary Fellow) will take the chair at the Bicentenary Meeting of the Royal Society of Arts on 22 March 1954. The President R.I.B.A. has been invited to attend and will present an address of congratulations from the Royal Institute.

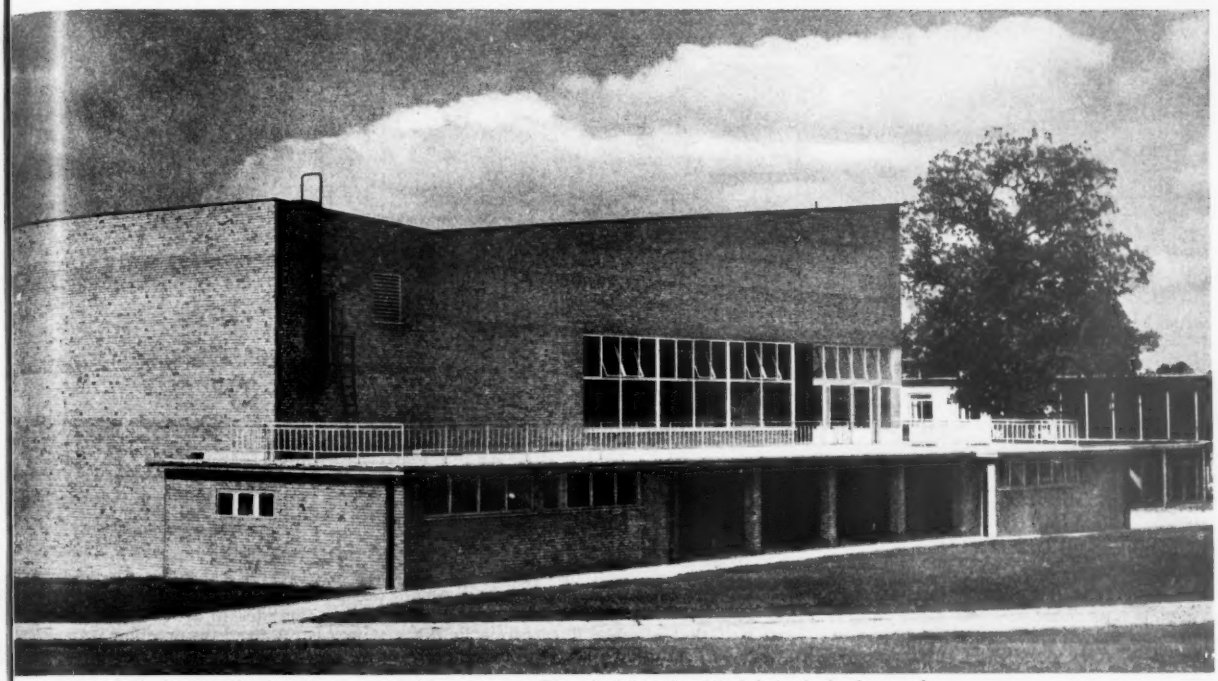
The Library Group

At a meeting of the Library Group on Monday 16 November, Mr. Arthur M. Foyle [*A*] is to introduce a discussion on 19th century working-class housing, with special reference to the work of Henry Roberts.

R.I.B.A. Diary

TUESDAY 3 NOVEMBER. 6 P.M. General Meeting. President's Inaugural Address. Presentation of London Architecture Bronze Medal.

MONDAY 16 NOVEMBER. 6 P.M. Library Group meeting. *Nineteenth Century Working Class Housing with Special Reference to the Work of Henry Roberts.* Introduced by Mr. Arthur M. Foyle, A.M.T.P.I. [*A*].



The assembly hall, showing the dressing rooms and terrace over. The administration block is in the background

Blackwell Secondary Modern School

Headstone Lane, Harrow: Assembly Hall, Gymnasia, etc.

Architects: John and Elizabeth Eastwick-Field [*A/A*] in collaboration with C. G. Stillman [*F*], County Architect, Middlesex County Council.

THE PROGRAMME for the erection of Blackwell school was divided into two phases, the first being part of the operational programme of school building which permitted only single-storey structures. This first portion was designed by the County Architect in 1946 as a comprehensive secondary school for 900 pupils, but while it was being built the project was changed to a secondary modern school of the same size and the classrooms, practical rooms and dining-rooms were built and occupied. The classrooms were arranged in parallel wings on two opposite sides of a court approximately 350 ft. by 210 ft., the dining and music rooms faced the third side, the fourth being left open.

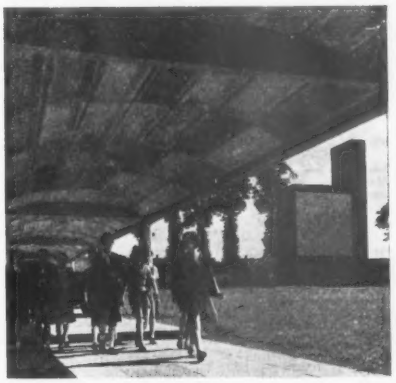
The buildings described in this article form the second phase of the programme and include two gymnasia, an administration block, an assembly hall and covered ways. In the brief given to the architects it was suggested that these buildings should act as a foil to the standard construction of the existing single-storey classrooms and should introduce some variety to the whole scheme. The architects therefore felt themselves free to choose the most appropriate methods of construction for each of the new buildings. Steel was scarce and so was timber for shuttering; it was therefore decided to use load-bearing brickwork in combination with precast reinforced concrete floors and roofs; in fact the only structural steelwork used is that in the roof construction of the assembly hall.

Administration Block. This has two storeys; an office, staff lavatories and medical inspection room occupy the ground floor, and the first floor has accommodation for the secretary and the head and senior teachers, with two staff rooms. There is also a hall giving access to the western range of existing buildings and also to two covered ways; one leading to the new east gymnasium, the other to the assembly hall.

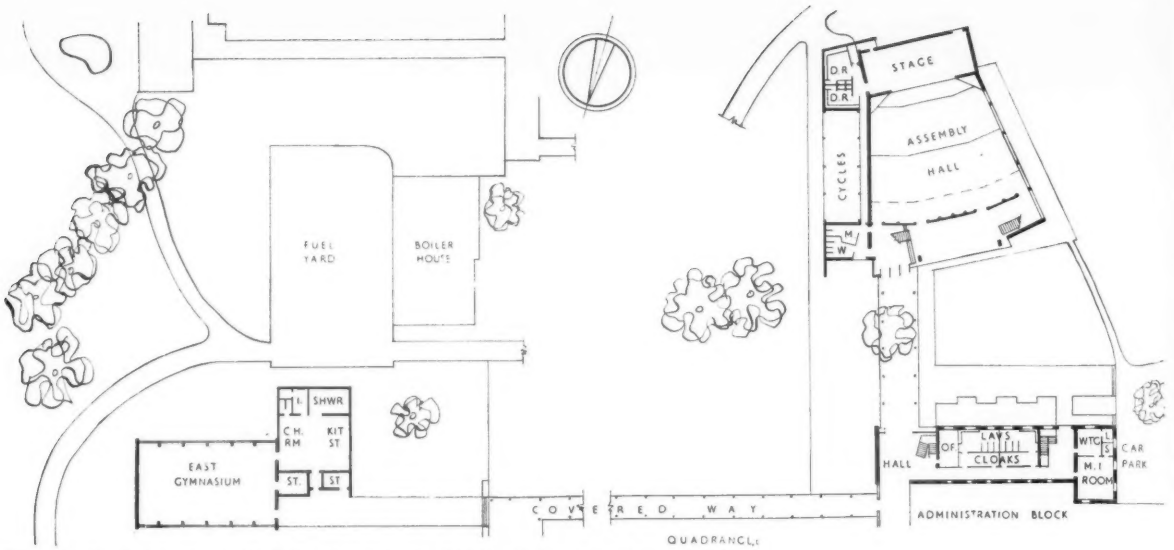
The general construction of this administration block comprises load-bearing stock brickwork, prestressed concrete floor units to the first floor, and reinforced concrete beams for the roof, finished with ¾ in. asphalt on lightweight screed.

Gymnasia. These are constructed with stressed skin reinforced concrete roofs cast in situ on woodwool permanent shuttering and supported on precast reinforced concrete columns and end walls of 9 in. concrete between two skins of 4½ in. brickwork. The flooring is beech strip on joists laid loose on 1 in. bitumen-bonded fibreglass on one-brick sleeper walls laid on the site concrete. The changing rooms have 9 in. brick cross walls and external walls of 6 in. hollow clay blocks, rendered. The roof units are prestressed and span 37 ft. The floors are finished in beech block except in the showers and lavatories where the finish is mastic asphalt.

The covered ways have reinforced concrete columns and roofs of precast reinforced concrete troughing units and in situ topping, finished with screed and two coasts of bitumen-rubber composition.



The covered way linking the classroom blocks



Site plan showing the assembly hall, administration block and east gymnasium

The Assembly Hall. Of all the buildings the assembly hall called for the most careful consideration, since it had to meet a number of often conflicting requirements. The total number of seats asked for was 960; and it was eventually arranged for the ground floor to have 380 fixed and 276 loose seats, with 303 fixed seats in the balcony. The intended use of the hall would be as follows:—

1. *Use by school in school hours.*	
(*a*) Morning assembly.	Daily, for up to 1,100 pupils and staff. (The figure of 960 is the theoretical number of staff and pupils based on 30 pupils per classroom.)
(*b*) Group activities.	2 or 3 hours a day by groups of 50–100 children for dancing, miming and drama.
(*c*) Special films.	Approximately 10 occasions a year.
(*d*) Dress rehearsals for drama and drama competitions.	Approximately 10 occasions a year.
2. *Use by school in evenings.*	
(*a*) School clubs and societies.	Frequently after school hours.
(*b*) School plays, parents' evenings, and films for parents.	Approximately 12 evenings a year.
(*c*) Inter-school competitions and festivals.	Approximately 12 evenings a year for drama, music and folk dancing, etc.
3. *Use in the evenings by public.*	
(*a*) By local societies for meetings, whist drives, rehearsals, etc., attended only by members.	Unpredictable; demand created by existence of hall.
(*b*) Public performance of plays and music, dances and public meetings.	Approximately 30 evenings a year.

It was considered important to satisfy as nearly as possible the requirements of these various activities as it was known that the school would specialise in drama, music and dancing. The stage and its accessories must receive special attention if the dramatic activities were to be provided for satisfactorily.

In deciding the design of the assembly hall the architects were influenced by the following considerations; (*a*) when 960 seats have to be provided in a school hall it is essential to have ramped seats for at least half that number if everyone in the audience is to be able to see and hear what is going on at the front of the hall; (*b*) as a flat area of 1,800 sq. ft. is sufficient for dancing and free activity for one or two classes during teaching periods, the rear part of the ground floor may be ramped; (*c*) if a formal stage arrangement is to be used at any time an excessive width of hall, especially near the front, is a disadvantage, and the shape must be fairly symmetrical. It was therefore decided to adopt a wedge-shaped plan as this, with the inclusion of a balcony, would permit the farthest seats to be kept within a reasonable distance of the stage.

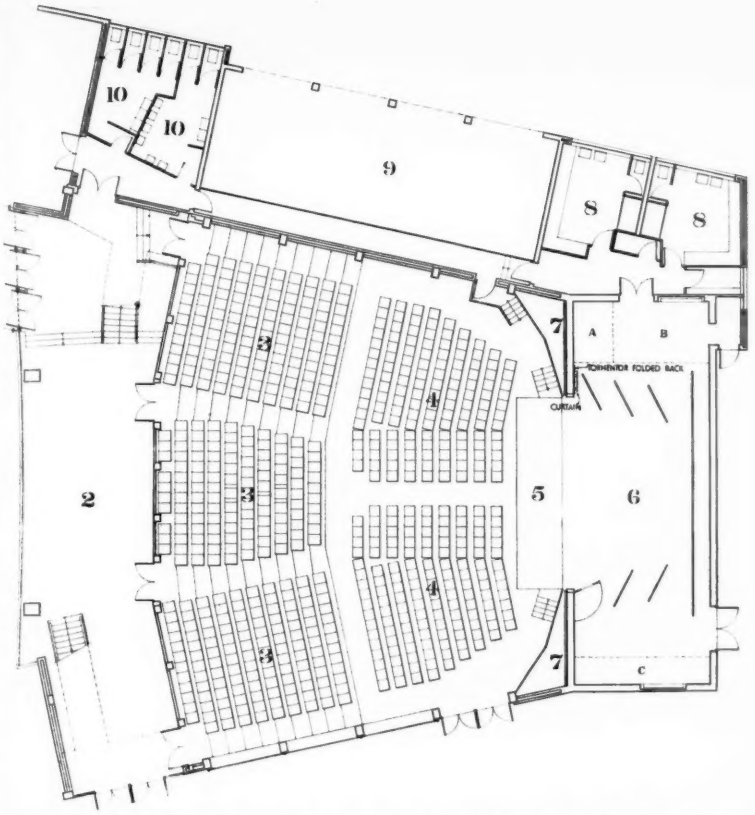
The hall was designed on a plan that would allow it to be filled and emptied quickly; in particular, access to the balcony was arranged to lead to the front rather than to the back in order to avoid lengthy staircases. A fixed tip-up chair was wanted for the steppings on the balcony and at the back of the hall on the ground floor, but as there was then no light and cheap tip-up chair on the market a new pattern was specially designed by the architects in collaboration with the manufacturers. The steppings are raised sufficiently to allow most of the flat part of the floor to be seen from any seat.

As the school would specialise in music, dancing and drama it was necessary to have a properly equipped stage; nevertheless, since dancing and music would predominate, and since these activities are best performed in front of the proscenium opening an arrangement was sought which would avoid a background of an empty stage or closed curtains, notoriously bad acoustically. The proscenium wall was therefore conceived as a panelled screen of which the centre part opens to reveal the stage. These panels provide a hard reflective background which is essential for the proper hearing of speech and music.

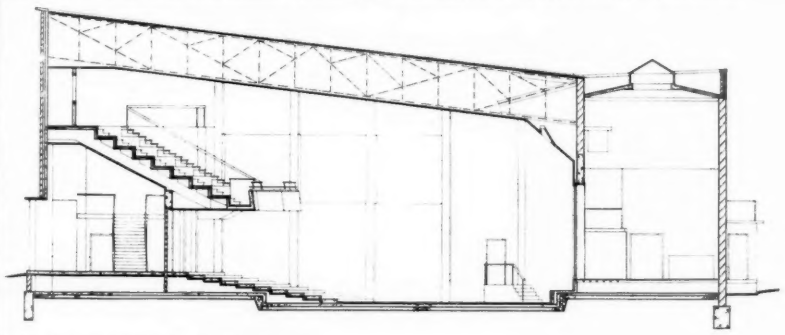
Portable wooden boxes were provided in order to satisfy the needs for a concert platform in front of the closed proscenium opening and also for an apron stage for informal drama and pageants. The accompanying illustrations show that these boxes give considerable scope for imaginative arrangement and for use as 'props'.

Design of Stage. In the detailed designing of the stage with its scenery and lighting the architects received valuable help from the Planning Advice Department of the Arts Council of Great Britain.

The proscenium opening is 28 ft. wide and 14 ft. high. This width is somewhat greater than that often recommended for schools, but it was intentionally made so since it is not unusual for a whole class or more to be on the stage at one time.



Ground floor plan of assembly hall. 2, entrance hall; 3, 380 fixed seats; 4, 276 removable seats; 5, apron stage; 6, stage, A, lighting platform over, B, fan chamber over, C, fly gallery over. 7, sliding panels to close proscenium opening; 8, dressing room; 9, cycle store; 10, lavatories

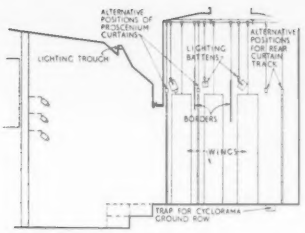


Section through assembly hall and stage

Including the wings the stage is 20 ft. deep and 56 ft. wide. Possibly some dramatic producers would like a greater depth and a passage behind, but players can pass from one side to the other behind a backcloth or curtains, except when the plain rear wall is being used as a cyclorama.

The accommodation of scenery not required for a particular play raises a problem. In a theatre provision may be made for the scenery to be 'flown', in which case the height of the stage must be nearly three times that of the proscenium opening. In schools flies are not necessary and at this school the stage is high enough to allow the scenery and lighting units to be hung from a steel framework, known as a grid and for borders to be flown. It also permits an electricians' platform and a fan chamber to be placed over one of the wing spaces and a raised fly gallery over the other.

The curtain track is hung from the grid, and as two sets of pulleys and lines are installed it may be suspended either just behind the proscenium opening or 5 ft. back. On each side of the stage there is a 'tormentor', a wooden panel hinged to the side of the proscenium opening and containing a door, and when the curtains



Section through stage

are hung in the 5-ft. back position the tormentors are swung partly across the stage and the doors give access to the forestage. Such matters as the arrangement of the wings and borders need to be thought out early in the design.* A large proscenium opening and a deep stage may lead to difficulties in masking and too cumbersome and expensive scenery.

It is sometimes said that school stages do not require the costly and elaborate lighting equipment provided in a commercial theatre; this is no doubt true but it should be borne in mind that an amateur actor is less able to overcome the handicap of poor scenery and inadequate lighting than is his professional counterpart.

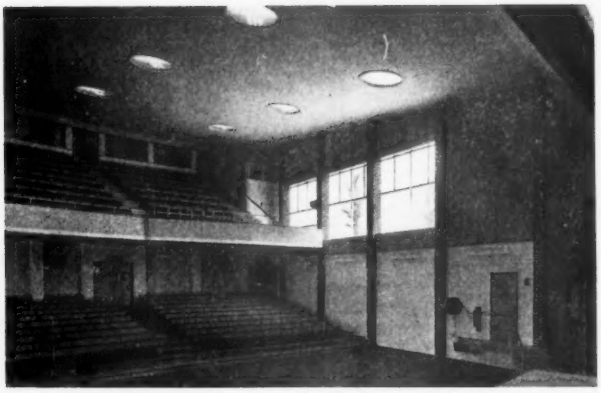
Compared with stages at most other schools the Blackwell stage is large, although it was designed to the minimum dimensions recommended by amateur drama specialists. The cost of providing what is considered the minimum amount of lighting equipment was considerable, and it was decided that the actual fittings should be bought by the school from time to time. The equipment installed under the contract includes the wiring and a 'sunset' type dimmer with nine dimmers and provision for a further nine. The complete scheme will have five 500 watt floods and four 500 watt spots suspended from the proscenium batten, and compartment battens suspended from No. 2 and No. 3 battens and portable floods wired to stage dips. This arrangement is unusual, as customary lighting consists almost entirely of compartment battens, but the advantage of having all spots and floods on the proscenium batten is that it allows more control and greater dramatic effect; a valuable asset when it is unlikely that elaborate scenery will be provided.

As there is an apron stage the front of house lighting is important; this will be provided by spot lanterns fixed to the walls at each side of the proscenium opening, and wiring has been run for three 1,000 watt lanterns on each side.

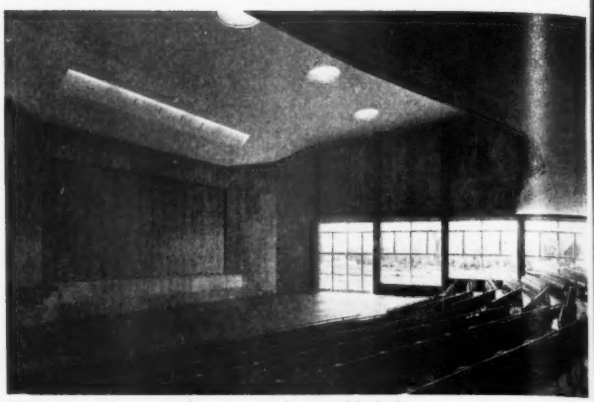
The main lighting for the hall is provided by twelve groups of six 4-ft. fluorescent tubes above a 4 ft. diameter wired glass panel set in a steel ring incorporated in the ceiling framework. In addition to the general lighting there is a trough of ten 5-ft. tubes set in the front part of the ceiling to increase the light on the apron stage.

[*continued on page* 476]

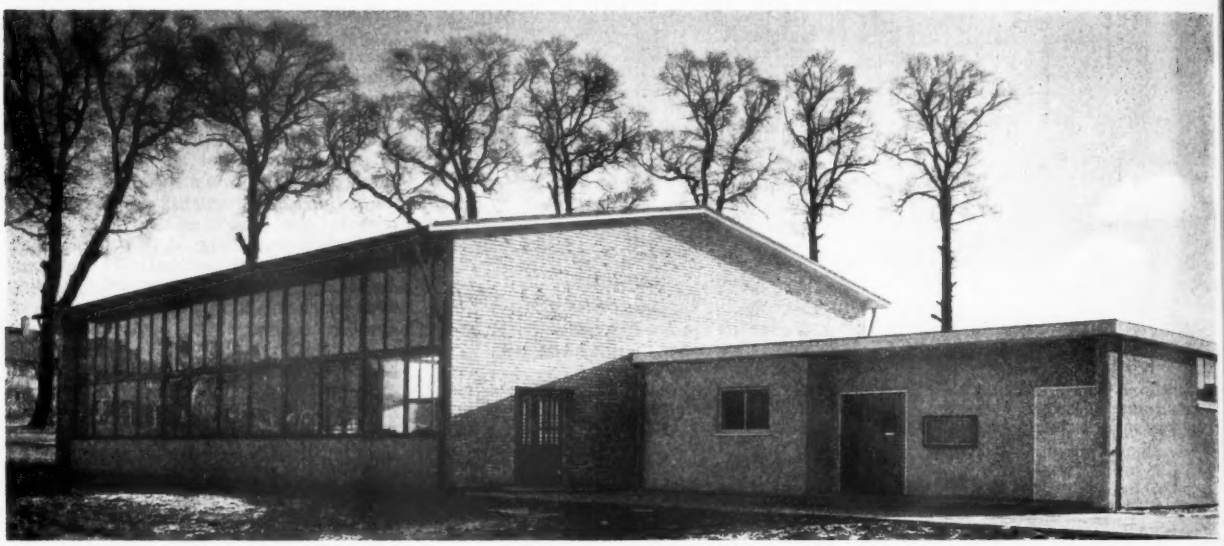
* *Essentials of Stage Planning*, by Stanley Bell, Norman Marshall and Richard Southern. Published by Frederick Muller Ltd.
Stage Planning and Equipment, by P. Corry. Published by the Strand Electric Company.



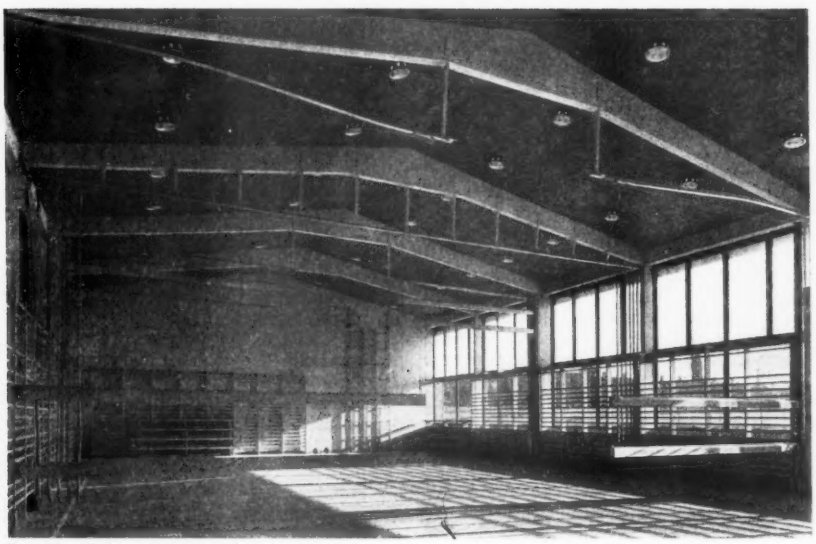
The assembly hall from the stage. The post-tensioned brick piers are seen on the right



The proscenium and front part of assembly hall



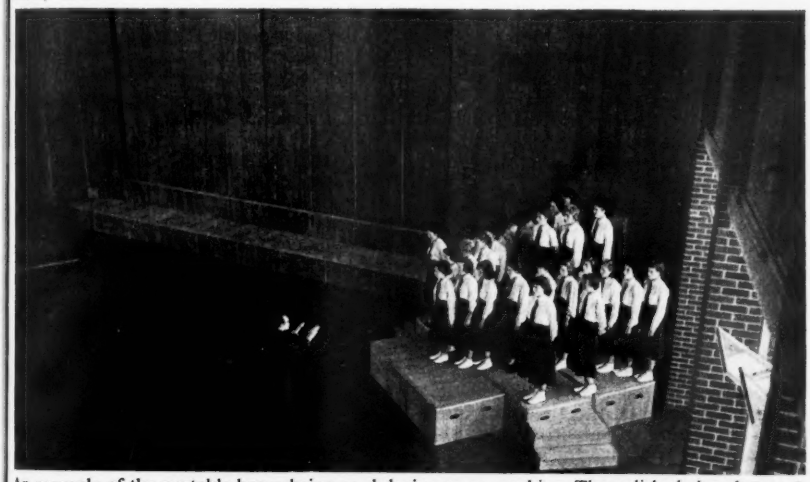
The east gymnasium, changing room and stores



Interior of the east gymnasium

Hall and staircase in the administration block

Use of forestage and portable boxes for drama, showing the tormentors. The curtains are in the rear position

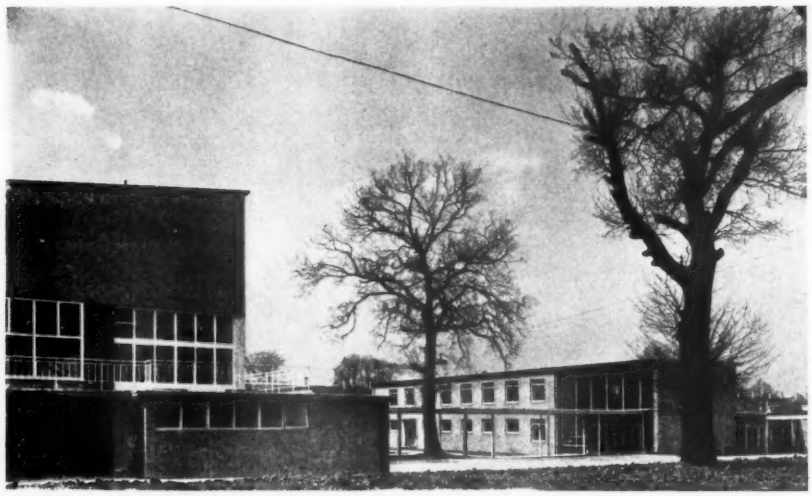


An example of the portable boxes being used during verse-speaking. The polished elm ply panelling provides an excellent sounding-board

The boxes being used imaginatively as props, the action taking place on the floor. A sketch from *Tom Sawyer*, 'Whitewashing the fence'

Use of front part of assembly floor for 'free activity'. The stepped seats at the rear of the floor and in the gallery are sufficiently ramped to enable such displays to be easily seen

The sliding panels being drawn across the proscenium opening



View of administration block and covered way to assembly hall

[*continued from page* 473]

Wall fittings at the sides and back of the hall have been installed to give sparkle to the lighting and a greater sense of intimacy. The ceiling lighting is switched so that it can be brought up in four stages, and is also two-way switched to enable it to be controlled from the stage as well as from the vestibule. Provision has been made for sound equipment and for a film projector.

In considering the acoustic treatment of the hall the architects consulted Mr. Hope Bagenal [*F*]. A wedge-shape plan was ultimately chosen, for reasons already stated, although it was known to add to the acoustic problem and meant that more absorbents than usual were needed to avoid return focusing of sound waves to the front of the hall. A fairly low reverberation time resulted, not in itself a disadvantage, as in a school hall it is better to have a short reverberation time that will allow speech to be clearly heard rather than a longer time which—although giving music more singing tone—would tend to make speech less intelligible.

In contrast with most theatres, which have walls unpierced by windows, surfaces broken up by tiers, boxes and mouldings, upholstered chairs and thickly-carpeted floors, it was difficult in this hall to find sufficient wall space for the required acoustic absorbents. It was therefore decided to use materials of high absorbing capacity on the side and rear walls, and to make the ceiling and panels beside the stage hard reflectors. The side walls are panelled in 6 ft. by 2 ft. by 1 in. standard woodwool slabs nailed with a 1 in. space to battens on the brickwork, and the rear walls have been finished with perforated fibreboard tiles stuck directly to the brickwork. The front of the balcony is finished with vermiculite plaster and—like the rear

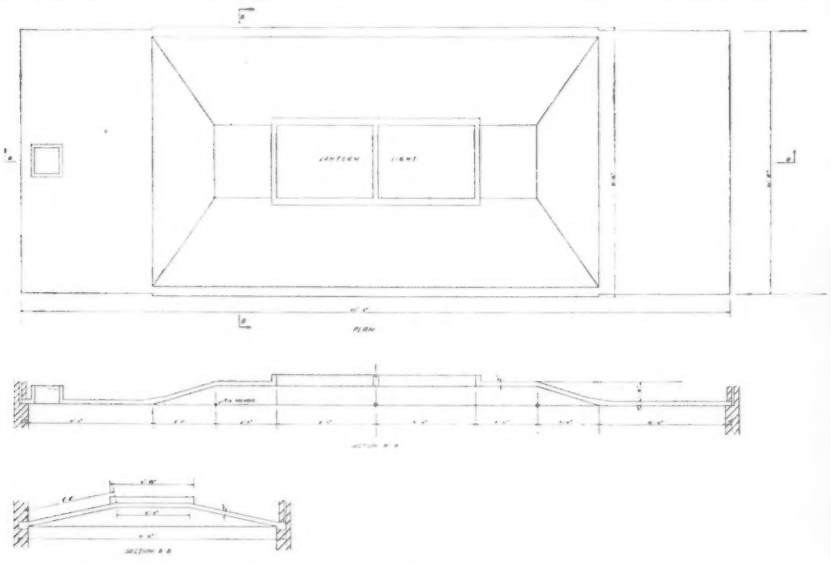


Fig. 2. The stage roof. Roof slab spans 24 ft. without beams; it is 4 in. thick

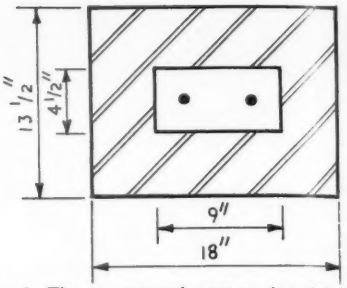


Fig. 1. The pre-stressed post-tensioned brick piers in assembly hall

walls—is so shaped as to prevent a concentration of sound waves returning to the front of the hall.

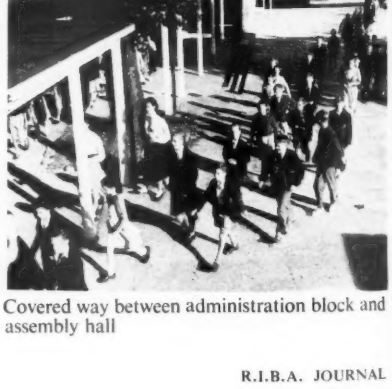
The calculated reverberation times with a full audience are as follows:

Frequency, c.p.s.	125	500	2,000	4,000
R.T. in seconds	1·35	0·9	0·85	0·8

Heating of the hall is by low pressure hot water from a central boiler house which serves the whole school. The hall and vestibule have floor coils and a thermostatically-controlled extract fan maintains an even temperature by varying the rate of ventilation. The whole of the roof space acts as a duct, air being drawn through grilles in the ceiling above the balcony and extracted through the fan chamber over the stage. There is also an extract grille over the stage. The heating scheme was designed in consultation with the heating engineers of the County Architect's Department, and the electrical services in consultation with the electrical engineers of the County Engineer s Department.

The piers to the side walls of the assembly hall are in Staffordshire blues post-tensioned with two steel rods; and so far as is known it is the first instance where post-tensioned brickwork has been used. Mr. F. J. Samuely, the consulting engineer for the work, has contributed a note giving technical details of these piers and other parts of the buildings. The hall roof has been constructed with steel trusses and Stramit roof decking.

The stage is finished with Parana pine strip and the flat part of the hall floor with ¾-in. Muhuhu hardwood blocks, end grip and laid over heating pipes. This wood was one of the very few recommended for such a situation.



Covered way between administration block and assembly hall

The assistant architect was A. Baynes [*A*], the consulting structural engineer F. J. Samuely, B.Sc., A.M.I.C.E., M.I.W., quantity surveyors Crump and Trinick, F.R.I.C.S.

Note by F. J. Samuely

When designing a brick pier for a relatively high building it is not the lack of compressive strength that defines the section of the pier but the complete lack of tensile strength in the brickwork. This weakness is very much the same as that of concrete, only very much intensified. It appeared, therefore, that this assembly hall was an ideal case for prestressing. If a primary compressive stress can be introduced into the brick pier to make up for any tension caused by wind forces, the size required for the pier would become very much smaller. This, of course, is nothing new; it was well known to the Romans, who used to put a heavy weight on to such piers to stabilise them. Twentieth-century technique allows internal prestressing to be used instead of an external load.

In this particular case a brick pier 13½ in. × 18 in. was designed omitting the centre 9 in. × 4½ in. (Fig. 1). This 9 in. × 4½ in. hole was carried down into the foundation, where access to it was left. When each pier was finished two Lee McCall high-tensile steel bars were inserted from the top and screwed into two nuts held at the bottom, leading on to a plate anchored to the foundation. A similar plate bridging the gap of 9 in. × 4½ in. was arranged at the top of the pier. The two bars projected through this plate and were stressed by Lee McCall jacks in the ordinary way. The permitted brick stress was 16 tons/in.² and the piers were prestressed up to half this amount. Wind in either direction would then cause an additional 8 tons/in.² compression on one side and tension on the other side. The two compression stresses would add, but on the tension side the prestressing would counteract the wind stress.

One great advantage which brickwork has over concrete is that after the initial shrinkage the creep is very much smaller.

Other points of structural interest are:—(*a*) The stage roof. In this the roof slab spans 24 ft. without any beams but is only 4 in. thick. This has been achieved by giving the slab what is tantamount to an upward dishing of 2 ft. 6 in. depth (Fig. 2). (*b*) The slab over the gymnasium (40 ft. × 70 ft.) was designed on very similar principles. (*c*) There is a shell roof over the covered way spanning 30 ft. × 10 ft. which is produced from trough-shaped precast concrete units laid side by side to give the shape of a shell and covered by in situ concrete so that no shuttering was required. The coffering due to the troughs is visible from the underside and gives the roof a characteristic appearance.

The Work of R.I.B.A. Committees

No. 1. The Committee for the Provision of Professional Text and Reference Books

To answer in some measure the question 'What does the R.I.B.A. do?' it has been decided to publish from time to time brief articles on the work of each of the Royal Institute's committees. Committees have been asked to supply such articles and these will be published as they are received and not in any order of implied seniority or importance. Although the articles naturally cannot discuss items under consideration by the Council they will be as informative and factual as possible. This first article describes the work of a committee which, though hard-working, normally receives no limelight.

THE INSTITUTE'S structure of committees is very much alive and in many respects unconventional, fashioned in the furnace of necessity, to meet the special needs of the profession in a period of great changes. The Committee for the Provision of Professional Text and Reference Books is one of the more unusual members of the group, and probably has no direct parallel in other professional Institutes.

Its function is mainly to see that the profession gets the text and reference books it needs. People are always writing books, of course, and there is no general need to stimulate the flow in terms of quantity, but the pattern of this 'voluntary' authorship does not usually coincide very closely with the pattern of professional needs at any given moment, and this was felt to be particularly the case with architectural books towards the end of the 1939–45 war, though it is broadly true at all times. The Committee was formed in 1944 to do its best to press the pattern of authorship as far as practicable into the same shape as the pattern of needs.

Its first job was the production of a series of books on construction written explicitly for architects. (This is a field where architects have often had to 'make do' with books written for the probably larger market of building schools). A sub-committee made an analysis of the material to be covered, suggested a way of sub-dividing it for writing and publication, and put forward suggestions for the kind of approach to use in each main part. Then suitable authors were sought and discovered, and the manuscripts prepared, the author sometimes being helped by a successful application for scholarship funds from the Institute. Now we are in the position where one of the books, *Building Materials*, by C. C. Handisyde, is in its second edition, one has recently been published, *Structure in Building*, by W. Fisher Cassie and J. H. Napper, and the third and last is in an advance stage of preparation. The information they contain is unique, the approach is novel but apparently successful, and a situation has been created which will encourage further developments along these lines by these and—we hope—by other authors seeking further improvements.

This exemplifies the way the Committee works on one kind of problem, that of the entirely new book, and the series mentioned is being followed by other books generated in much the same way. But this is not the only way the Committee works, for there is an extensive range of books on key subjects which are allowed by publishers to pass out of print and stay out, pending the exertion of some kind of pressure, and these frequently contain needed material. The war caused many such casualties, due not only to publishing difficulties but also to the fact that despite many merits a book may get out of date, and also to doubts in the publisher's mind about the market for the books. The Committee tries to identify the books that need republishing, and to put pressure on those concerned to get necessary revisions made. There have been several successes of this kind.

Finding the profession's needs has constantly exercised the Committee's minds, and apart from the ideas that emerge around the Committee table, systematic attempts have been made at times to find out from architectural schools, from libraries, and from practising architects just what subjects are felt to be inadequately covered by existing books. These have been fruitful for the identification of gaps. Another source of promising ideas and writers is the range of 'distinction' theses which come to the Institute from those who take the external examination. No doubt there is equally valuable material in the theses of students of the schools exempted from the R.I.B.A. finals, and the Heads of such schools would render the profession a service by letting the Committee see any they thought to be promising for development and publication.

It is a Committee in which long-term thinking is a constant necessity, because there is not only a long time between inception and publication, but often there is a long search for the right person to attempt a particular subject. This has its advantages, for the Committee membership acquires part of its strength for its work from the body of experience built up in the course of ranging to and fro over the pattern of architectural knowledge in its effort to get the right person and the right subject together in the right way at the right time.

Exhibition of Architectural Photography

Opened by the Earl of Rosse, M.B.E. [Hon A.], 8 October

The President in the Chair

The President R.I.B.A., Mr. Howard Robertson, M.C., A.R.A., S.A.D.G., said the R.I.B.A. were happy to have the exhibition on their premises. It was the first of its kind that had been held there. Architects and photographers had a mutual interest in the exhibition—if an architect's building was not very good the photographer became terribly important, and if the photographer was not very good he could do untold damage to the architect! In introducing Lord Rosse the President said he was already well known to architects as Chairman of the Georgian Group.

The Earl of Rosse said that he had for a considerable number of years taken a passionate interest in both architecture and photography. He thought that of all the arts architecture was the one which was best reproduced by photography, one reason being that colour was less important in architecture than in other arts. Architectural photographs were not only valuable as constituting accurate records of buildings but also made extremely beautiful pictures. In his opinion photography had every right to be classed as an art in itself when it was done in the way illustrated in the exhibition opened today. It was interesting that the first photograph —he believed—ever to be taken was of an architectural subject. It was a photograph of a window at Lacock Abbey taken by Fox Talbot in 1835.

Lord Rosse went on to say that it was desirable not only to have photographic records of old buildings but also of contemporary architecture. Photographs could not, of course, take the place of measured drawings if re-building were in question, but as a supplement to these, and purely as records for students, quite apart from questions of re-building, they were invaluable. He referred to the valuable work being done by the National Buildings Record, but said the organisation had only limited resources. It had been formed because of the danger to buildings during the war. Unfortunately the danger to buildings had not ceased with the war; it had increased. Our own vandals were sometimes even worse than those from overseas and, though public appreciation of the value of our buildings was probably greater than it was ten or fifteen years ago, and we had the Gowers Report and the new Bill now before the House, action did not always follow acceptance of a principle.

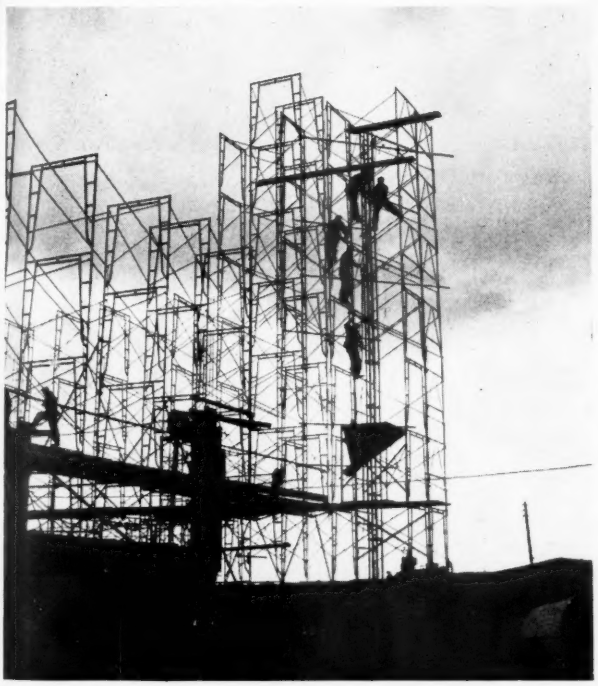
[*continued on page* 481]

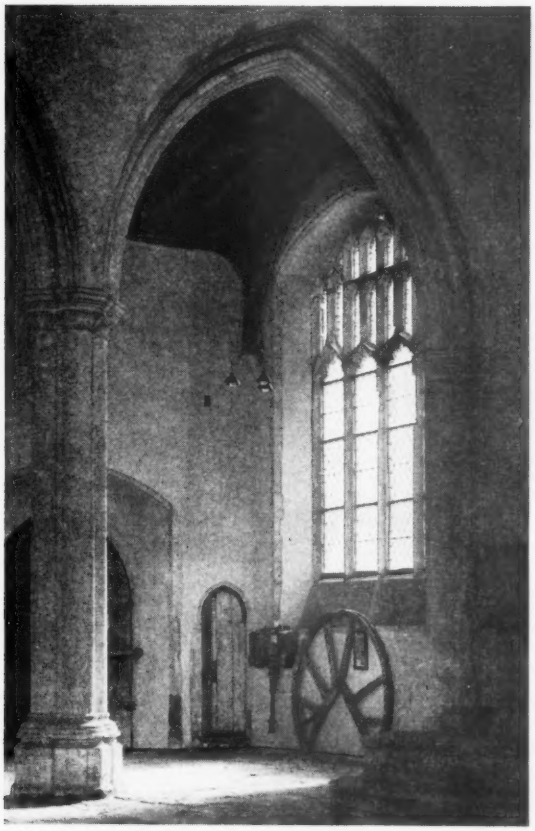
Primary School, Dulwich. J. R. Pantlin

Bridge by Thomas Telford, Macclesfield Canal. John McCann

Above: Chester Terrace. Right: King's College Chapel, Cambridge. Mrs. June McCann

Below: Erecting a hoist, Rothes Colliery, Fifeshire. J. C. Stillman. Right: Flats, Ilford, Essex. J. R. Pantlin





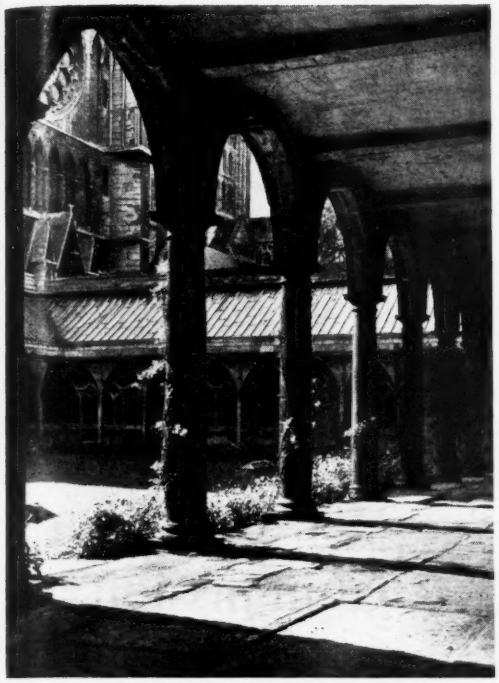
Aisle window, Blythburgh. L. I. M. Castleden

King's College, Gatehouse. T. J. Jones

Library, 'Ascot Wing'. D. T. V. Drumm

Casa de Los Picos, Segovia. E. M. Heimann

Altar and east window, Lawton Moor, Manchester. H. Milligan

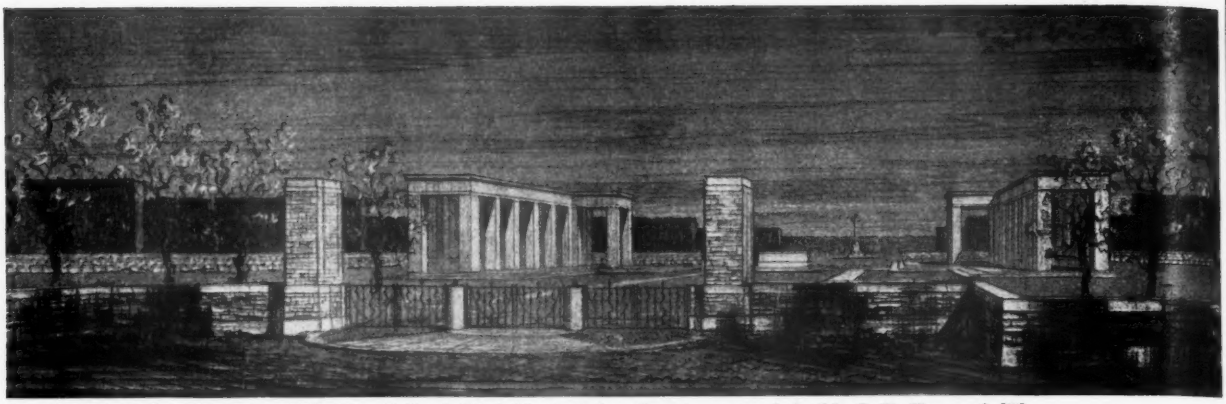


Above, Wren's Cloister, Lincoln Cathedral. H. C. Stacy. Right, Athenaeum Club. D. T. V. Drumm

Below, Georgian staircase, Ship Hotel, Chichester. Miss M. F. Harker. Below right, St. Paul's Church, Stratford, London. F. N. Warner

[*continued from page* 478]

The President of the Royal Photographic Society, Mr. Bertram Sinkinson, F.I.B.P., F.R.P.S., moving a vote of thanks to Lord Rosse, said he was delighted to be speaking in the names of the R.I.B.A. and the Royal Photographic Society on an occasion that provided a most satisfying demonstration of collaboration between the two organisations.



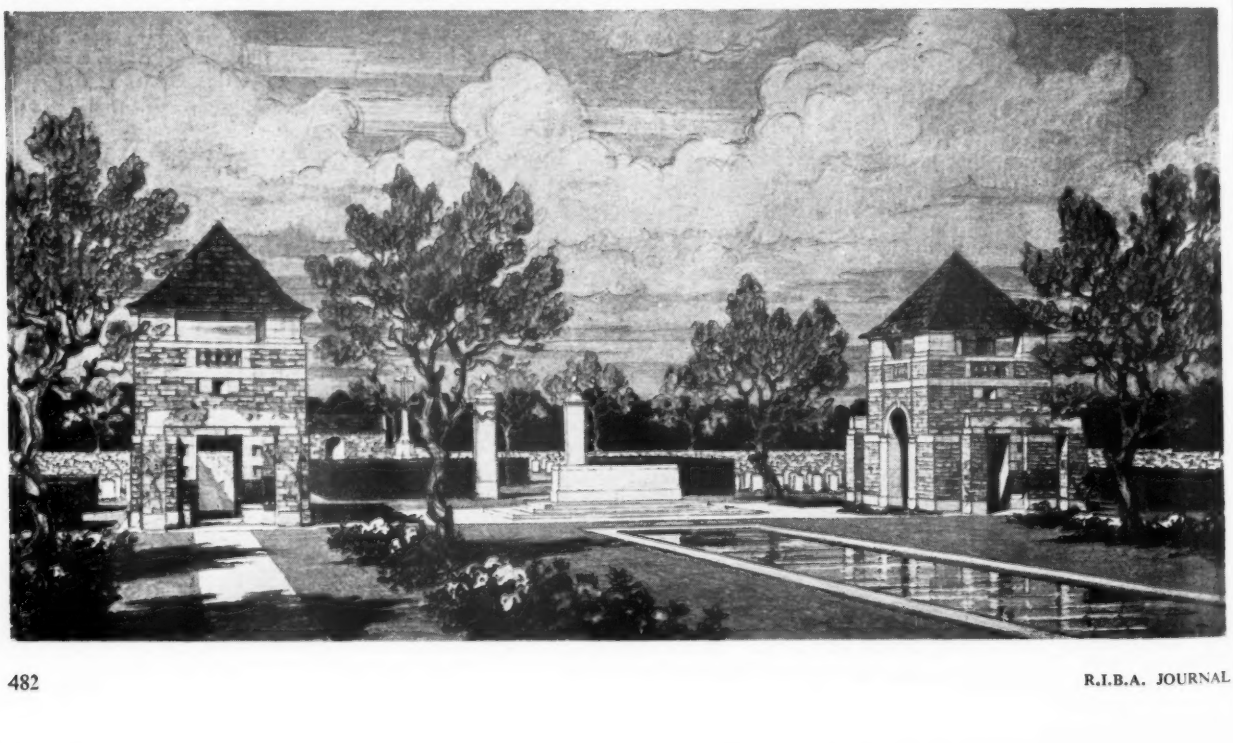
Groesbeck Canadian Cemetery at Nijmegen, Holland. Work illustrated on these two pages is by Mr. P. D. Hepworth [*F*]

The Imperial War Graves Commission

Architectural Work following the 1939-45 War.—Part II.

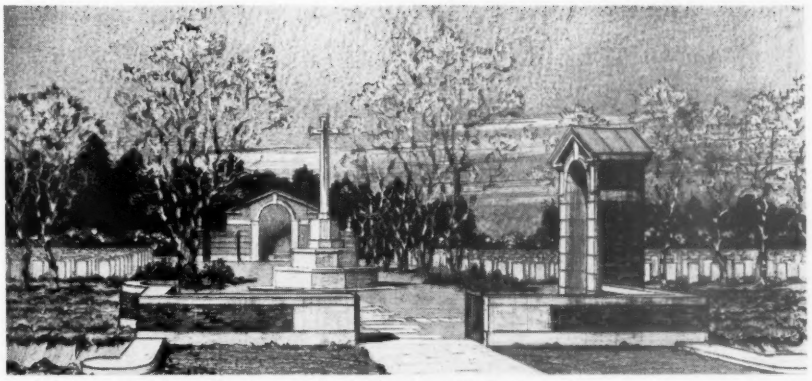
ON THESE PAGES are some examples of memorial and cemetery design in north-west Europe by Mr. P. D. Hepworth [*F*] and in south-east Asia by Mr. C. St. Clair Oakes, M.B.E., T.D. [*F*], as well as three naval memorials in this country which were the subject of competitions assessed by Mr. Edward Maufe, R.A. [*F*].

Above and below. Beny-sur-Mer Canadian Cemetery, France. The belvederes overlook the Arromanches beaches where the British landed on D-Day

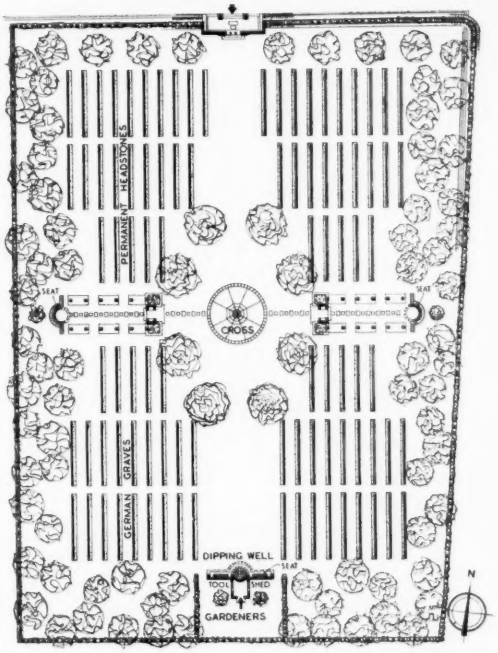


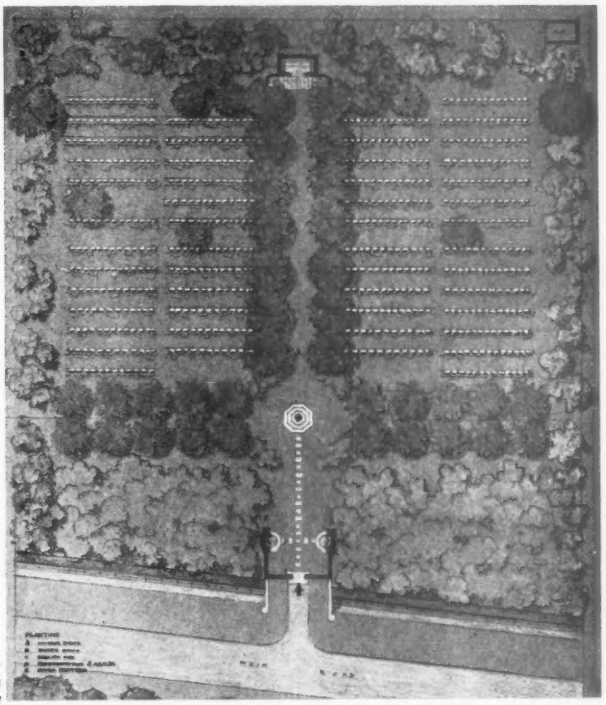
Mr. Hepworth's cemeteries are located in several countries which differ in traditional building materials and methods. In some, brickwork is the predominant material, in others local or imported stone has been used. Their sites—which were not selected by the architects—are equally varied. Some are sited on the flat terrain of the Netherlands, others in the rolling lands of Normandy and others again in the more varied landscape of Western Germany. In some instances the local inhabitants take an intense interest in the cemeteries and their maintenance, regarding the graves as those of the men who died to give them freedom while driving the enemy from their homes and villages.

We have made considerable use of Mr. Hepworth's superb perspective drawings in illustrating his work because in many instances these give the character of the finished designs rather better than do photographs, specially where trees are newly planted and as yet hardly perceptible by the camera. An example is the central group of trees at Tilly-sur-Seulles (on this page) which needs maturity to bring out the full effect of the design.



Perspective and, below, the plan of Mierlo Cemetery, Holland

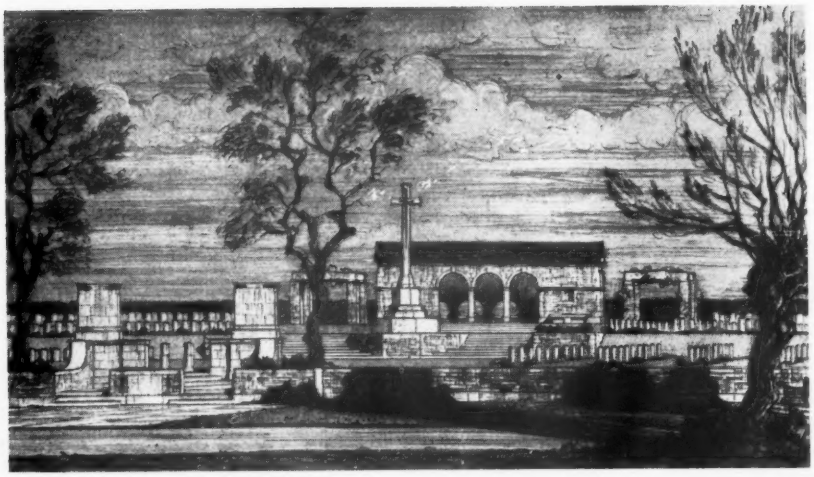




Tilly-sur-Seulles Cemetery, France. Above, the plan. Below, general view

The work of Mr. St. Clair Oakes in south-east Asia has not been easy to illustrate. Because of distances and physical difficulties in many places, work has been delayed and, even where it is more finished, the obtaining of good photographs is difficult. We give therefore only two examples, both of which are nearing completion.

Mention should also be made of the work of Mr. H. J. Brown [*A*] who has designed the main concentration cemeteries in India, Pakistan and Burma. These are at Delhi, Karachi, Madras and at Taukkyan, north of Rangoon. The main architectural features are the memorial to

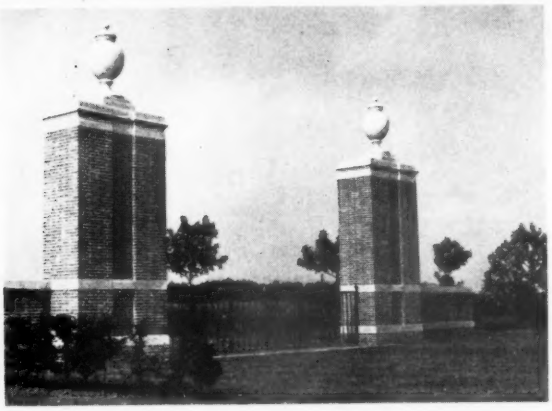


Left, perspective of Hottot-les-Bagues Cemetery, France

the missing to carry 27,000 names, at Taukkyan, and the memorial arches at Delhi and Karachi to the memory of 25,000 fighting men of the Indian forces who died in non-operational areas in India and Pakistan.

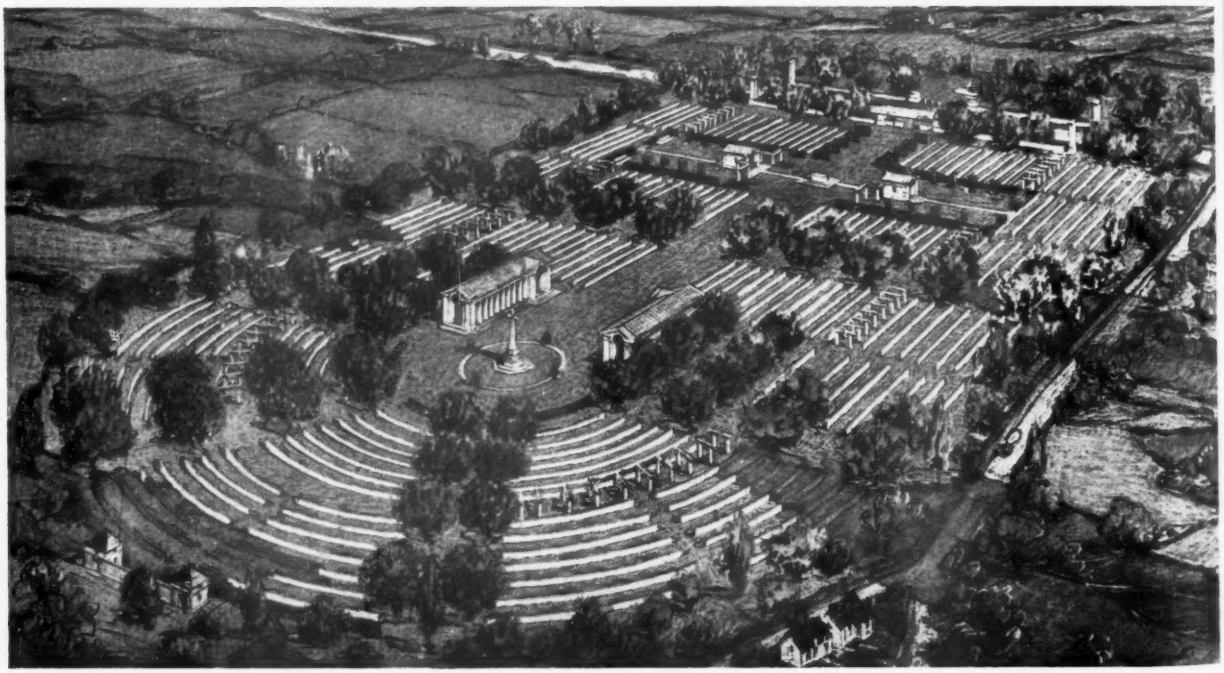
We regret that in Part I, published in the last JOURNAL, Mr. Louis de Soissons was wrongly stated to be an Associate of the Royal Academy whereas he is a Royal Academician.

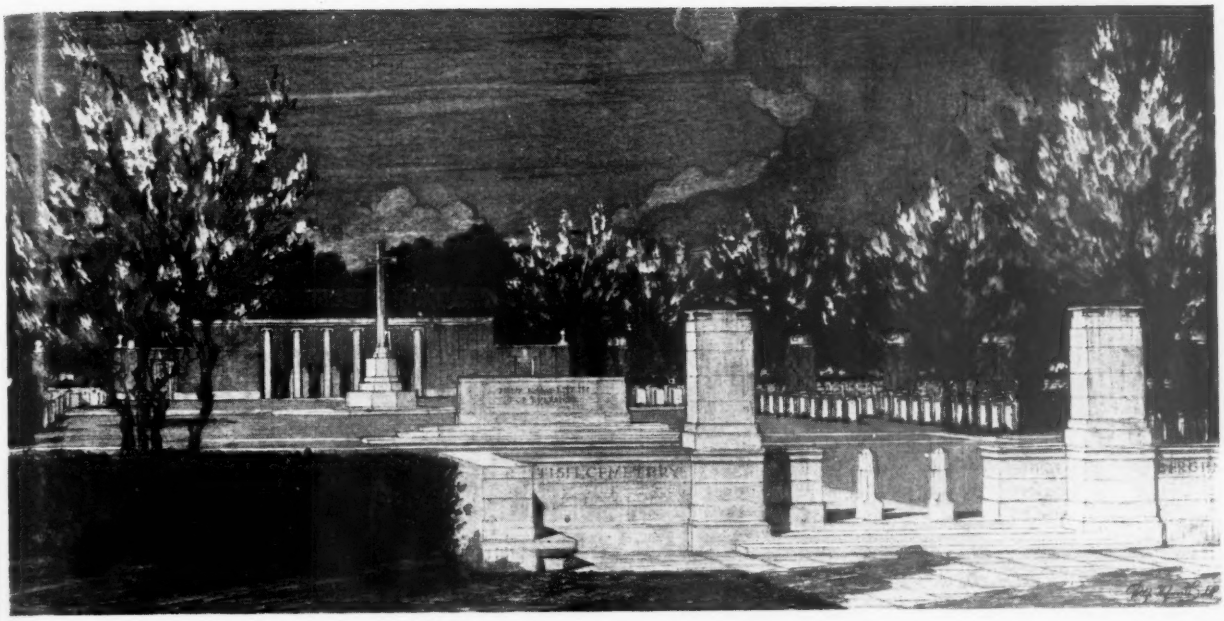
Below, view in Karterlee Cemetery, Belgium



Left, entrance gates and piers at Adegem Cemetery, Belgium

Below, aerial perspective of Bayeux Cemetery, the largest in France. Work illustrated on these two pages is by Mr. P. D. Hepworth [*F*]



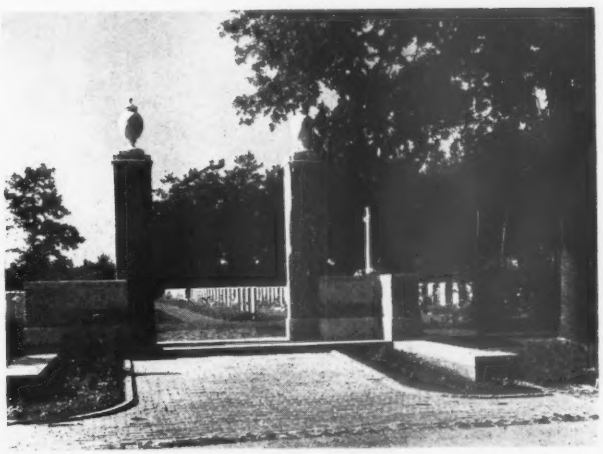


Perspective view in Bergen op Zoom Cemetery, Holland

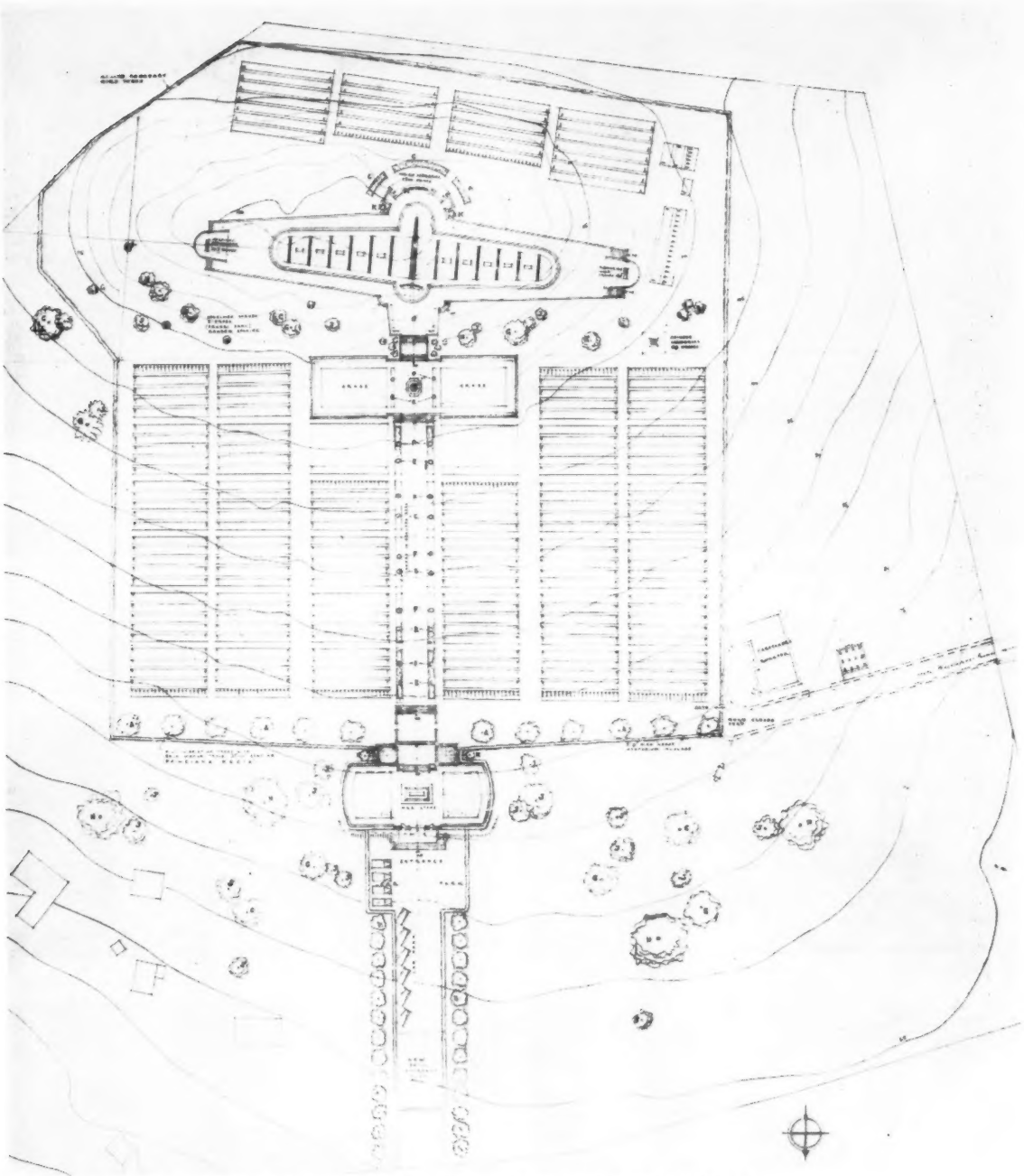
Entrance gateway and colonnade at Cantheaux Cemetery, France

Gateway at Cambes-en-Pleine Cemetery, France

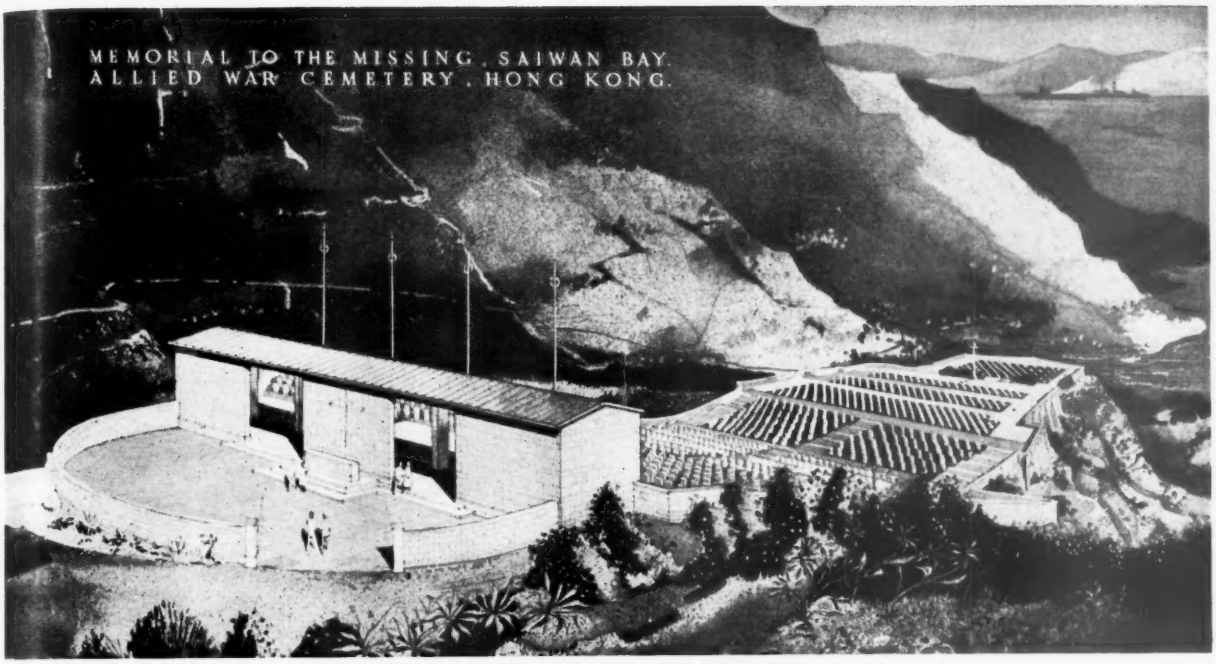
General view of Rainville Cemetery, France



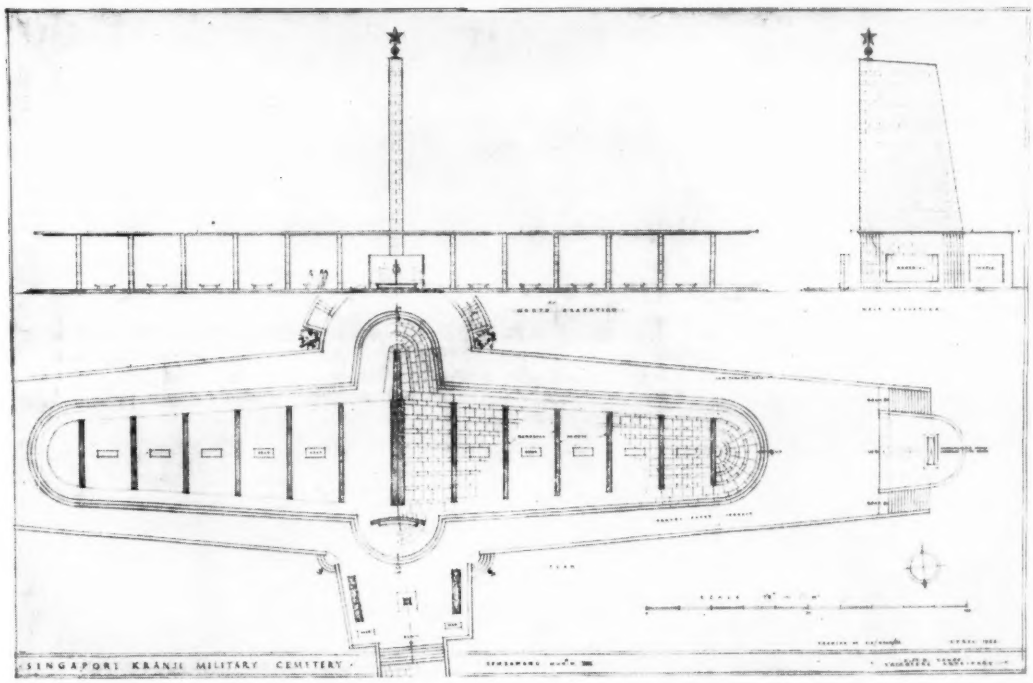
Entrance of Valkenswaard Cemetery, Holland



Kranji Cemetery, Singapore. General plan and section. Architect: C. St. Clair Oakes, M.B.E. [*F*]



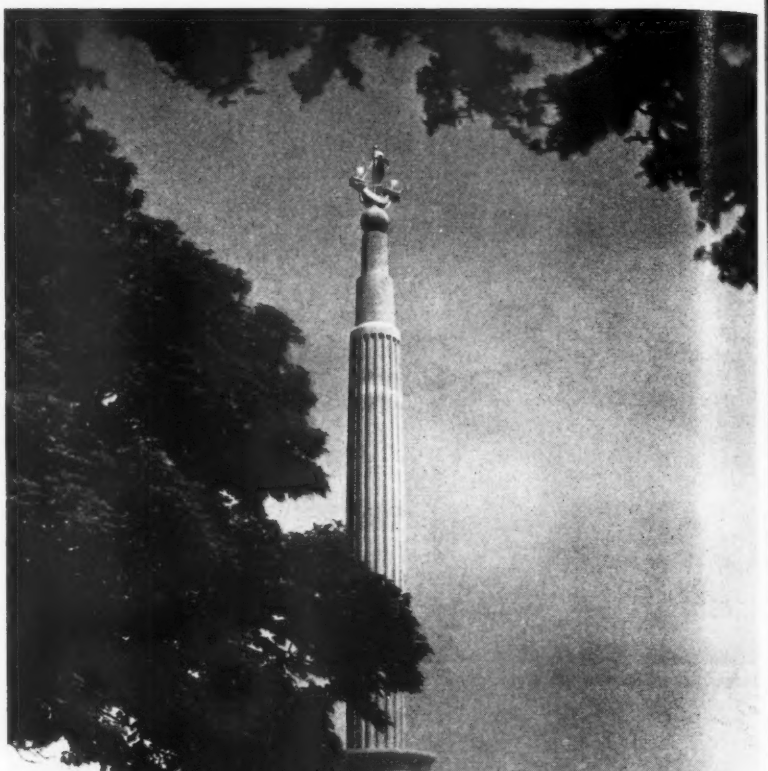
Perspective of Saiwan Bay Cemetery at Hong Kong. Architect: C. St. Clair Oakes, M.B.E. [*F*]



The drawings on these two pages are of Kranji Cemetery, Singapore. Architect: C. St. Clair Oakes, M.B.E. [*F*]. On a sloping site, the approach to it is from below and leads up through an avenue of trees past the Stone of Remembrance and Cross of Sacrifice to the Air Forces Memorial on the summit. The pylon of the Memorial is surmounted by the R.A.F. star and names are inscribed on the walls supporting the reinforced concrete canopy. The Memorial is under construction. There are also subsidiary memorials to Indian and Chinese forces and hospital services.

The entrance and lodges at Kranji Cemetery, Singapore

THESE OFFICERS AND MEN
OF THE ROYAL NAVAL PATROL
SERVICE DIED IN THE DEFENCE
OF THEIR COUNTRY AND HAVE
NO GRAVE BUT THE SEA
1939 — 1945



Above and right, the Royal Naval Patrol Service Memorial in Bellevue Park, Lowestoft. Architect: F. Hamer Crossley, Dipl.Arch. (L'pool) [*F*]

The three naval memorials illustrated on this page were the subject of architectural competitions. That at Lee-on-the-Solent bears the inscription 'These officers and men of the Fleet Air Arm died in the service of their country and have no grave but the sea.' The memorials at Lowestoft and Liverpool are to those men who lost their lives in naval auxiliary vessels such as minesweepers, corvettes, fuel carriers, armed merchant cruisers, armed boarding vessels, cable ships, rescue tugs, motor launches, naval seaplane tenders and many other types. Among them the *Rawalpindi* and the *Jervis Bay* won unique renown, but otherwise their work was unspectacular, though arduous, dangerous and calling for continuous high courage and endurance.

The Fleet Air Arm Memorial at Lee-on-the-Solent. Architects: J. C. Smith, Dip.Arch.(Dunelm) [*A*], and L. K. Pallister [*A*]

The Merchant Navy Memorial at Pier Head, Liverpool. Architects, the late Stanley H. Smith [*A*] and the late C. F. Blythin [*F*]

Decorative Wood Veneers

By J. L. Robertson

THE WOOD VENEER, in both its constructional and decorative forms, is of great importance to the architect today. In the former it is the raw material of plywood in its many varieties; in the latter it is the source of an almost limitless range of decorative effects, varying from the sober to the flamboyant, and from the relatively common to the unique and irreplaceable.

The art of veneering is by no means new. It was known in the days of ancient Egypt, but its modern revival began in France about the reign of Louis XIV, opening a new age in furniture design and manufacture. Since then the decorative veneer has continued to be used extensively on furniture but its use received a great stimulus in the early years of this century when the veneer cut on a saw began to be replaced by that sliced by a knife. A great deal of waste was eliminated and the speed of production greatly increased, so that the cost was reduced. Since then, great progress has been made in the development of veneer presses and adhesives, speeding up the process of laying and ensuring a sound and lasting bond between the face veneer and the base material. Nowadays this base is almost always plywood or blockboard, although a sheet metal base can be used to great advantage in certain circumstances.

These developments have brought to the architect an old-established material with great inherent virtues and a now widely-extended field of application. This has been recognised, and the decorative panel is today extensively used in many different kinds of interior decoration, but, curiously enough, the decorative veneer itself—its manufacture, its variety, its capabilities and its limitations—remains too obscure for the best use always to be made of it in varying circumstances. It is hoped that the following notes will be helpful to the architect or interior designer who wishes to avail himself (or herself) of this store of natural treasure.

Why Veneers? A metaphorical meaning has been attached to the word 'veneer', implying that it is something plausible used to cover something undesirable. Veneer *has* been used in this way; so have paint, cement and brick; but in each case it is the user who is damned, not the material. There are also a few who dismiss veneered work because 'it isn't genuine', in other words, because the core is not of the same material as the face. The same could be said of a Rembrandt, or of caviare spread on toast!

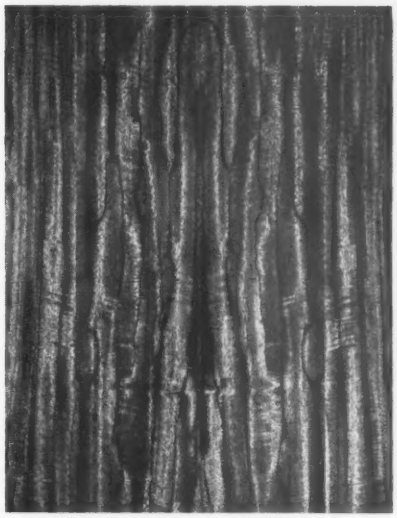
Veneer is not an expedient; it is a necessity. As the world realises more and more the virtues of fine woods the pressure upon them would be quite insupportable were solid timber the only source of supply available to meet the demand. Nature gives man in wood some of her loveliest works; but she gives them sparingly, grudgingly; and no one can assess or predict what supplies the future holds. Therefore, it is a duty to make the most of what we are given and this is done by turning these rarities into veneer. Not so many years ago, Cuban mahogany was felled and consumed with blissful disregard of the future, much of it being used in ways which we would today regard as sacrilegious. Thus as a commercial timber it is now almost extinct. There are a few solid logs left, and fortunately some of the finest specimens of all were put into veneer and kept on one side by one or two men who appreciated the wood more than the immediate profit which could have been taken. Today, therefore, by their providence we can still enjoy to a limited extent the rich beauty of a wood known and valued since the days of Elizabeth I.

There is another and very practical point. Most woods, properly handled as veneer, are tractable during manufacture and completely stable afterwards. Some of the same woods, in the solid, might be too expensive to be economic or else quite unsuited by their nature for the making of, say, large panels. Problems of narrow widths and frequent joints, or of difficult shrinkage characteristics may rule out entirely a solid timber which is both satisfactory and effective as veneer. This last point is of vital importance where central heating is involved. Although some solid timbers, carefully selected and even more carefully dried, can be used, the veneered panel with its balanced core of multiply or blockboard is infinitely better suited by its very nature to what are most exacting conditions for timber.

Veneer Logs. The manufacture of veneer calls for the cream of the log production, whatever the species concerned, and it is a very thin skimming of cream indeed—a minute percentage of the total felled and consumed. The whole trade, therefore, revolves about the finding and assessment of suitable logs.

No two are alike. Some give clear indications of what is inside; some give little or none; some are barefaced deceivers, fair to look at but rotten to the core. Every log poses a problem new and slightly different from that of the one preceding it, and a lifetime of experience cannot confer certainty about any log.

However, a few wide and elastic principles may be given. Logs for veneer must be, first and foremost, as sound as possible; they must measure not less than a certain minimum girth (which varies with the species); they must meet certain requirements regarding sapwood, colour, straightness of growth, figure and so on—and on! One point calls for further mention here—length. It should always be clearly remembered that, in very many woods, every additional foot demanded in veneer length sharply restricts the choice of logs available once the 'average' length for the species has been passed. This difficulty is far more acute in the case of woods such as walnut or maple, and generally much less so with mahoganies and other tropical hardwoods of large dimensions. It sometimes happens that, because a wood simply does not produce the length called for in a specification, disappointment and delay are incurred. Expert advice at the earliest possible stage can avoid much wasted time, work and expense.



An example of marble makore veneer

Conversion of Veneer Logs—Flitching. The writer is not foolhardy enough to attempt to explain why any log should be 'flitched' (i.e. prepared on a saw for cutting into veneer) in any particular way. How a log is flitched is inextricably bound up with all the variable and unknown characteristics mentioned already. Here we must confine ourselves simply to the ways in which it *can* be done, whatever the reason in any particular case.

On arrival at the sawmill the logs may or may not be de-barked before sawing. All should be carefully examined for iron in the form of nails, cleats, barbed wire, shell splinters (live cannon shells have been found before now) and so on. Walnut logs, in particular, have to be very carefully cleaned to remove stones and other foreign bodies embedded in the roots and crevices. If this is not done, expensive noises announce that the saw has suffered from the oversight.

For slicing (described below) logs may be flitched as shown in Fig. 1, or in a combination of two or more of them. The hatched areas show the waste which occurs in normal flitching, excluding any which may be incurred in the removal of defects. The parallel lines show the plane on which each flitch is cut.

It will be seen that the main difference between a squared-up and a half-quartered log is that the latter is cut through the

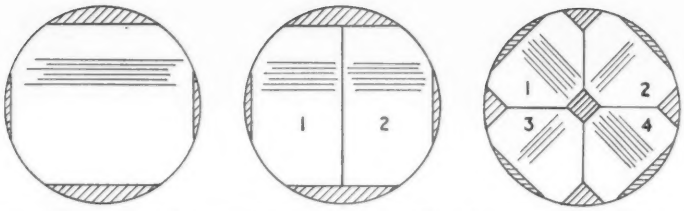


Fig. 1. Flitching. Left, squared up, one flitch. Middle, half quartered, two flitches. Right, quartered, four flitches

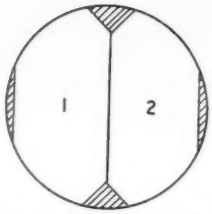


Fig. 2. Stay-log, two flitches

centre into two flitches. The type of veneer produced will be similar in both cases, but only half as wide from the half-quartered flitch; the advantage of the latter is that it allows cutting to take place in opposite directions, if necessary, and this produces better results in some woods. Both the squared-up and the half-quartered log differ from the quartered one in that they both show 'heart', or 'planky' grain, while the quartered logs show straight grain and also bring out to the best advantage the figure which some woods show on a radial face.

Another method of flitching, much less common than the three above, is used for a few woods. This is the stay-log method (Fig. 2), and we shall see how it is used later.

Veneer Log conversion—Steaming and Boiling. A few woods can be cut 'cold'. Sycamore is invariably cut this way if the white colour is to be retained; beech and poplar, too, are frequently cut cold. Nearly all other woods need to be softened for the knife, and this is done by steaming them, or, in the case of the hardest tropical species, by boiling them.

The process is simple. The flitches are taken from the sawmill and put into large pits; sometimes they are packed in sawdust, sometimes the pit is just closed with a lid. Then steam is turned on and the flitches stay in it for anything from two to ten days or more, depending upon the species, texture and nature of the log. The tough ones are popped into a tank fitted with a water-sealed lid and boiled until they, too, are amenable.

Slicing. There is common belief that all veneers are peeled on a lathe. The great majority of decorative veneers are sliced on horizontal or vertical machines. In both types a leaf of veneer, cut across the grain, is removed from the full length of the flitch at each stroke of the knife. Slices vary in length from about 9 ft. to 17 ft., and the thickness of the slice can be varied from about 0·3 mm ($\frac{1}{85}$ in.) to 3 mm ($\frac{1}{8}$ in.). The normal thickness range for decorative veneers is from about 0·55 mm ($\frac{1}{45}$ in.) to 0·9 mm ($\frac{1}{28}$ in.), the majority of European mills cutting between 0·6 mm ($\frac{1}{42}$ in.) and 0·8 mm ($\frac{1}{32}$ in.). On a flitch say 12 ft. long by 2 ft. wide, the accuracy required from these machines to obtain such thicknesses evenly over the whole surface is remarkable.

The horizontal and vertical machines achieve the same result, but in different ways. In the horizontal (Fig. 3), the flitch is fixed to a table, rises after each cut to present a fresh thickness, and the knife travels to and fro. In the vertical (Fig. 4), the knife is fixed in a vertical plane, advances horizontally after each cut to remove another thickness, and rocks to and fro to clear the flitch which rises and falls past the knife. (These sketches are far from accurate representations of the machines.) A hot controversy rages as to which is the better type of machine.

Peeling. This method is used for woods such as bird's eye maple, many kinds of burrs and generally speaking those woods which would either yield only uneconomical widths if sliced, or which display a characteristic figure or marking on the tangential face. The interest in peeling lies, not in the flitching (except for the stay-log), but in the way in which the log is arranged on the lathe (Fig. 5). The main requirement for a log destined for peeling is that it should be round, or nearly so.

In normal peeling the veneer should, in theory, come off in a continuous sheet, unless interrupted by a flute or defect in the log, or intentionally by means of a saw cut parallel to the axis. The latter is a common practice with decorative woods because it gives conveniently-sized separate leaves. In eccentric and double eccentric peeling separate sheets are automatically produced, with the characteristics of the peeled veneer, and considerably greater widths than could be got by slicing the same log.

Perhaps the most fascinating method of all, though, is stay-bar cutting. This relatively complicated process is used for some woods, such as satinwood, which should be cut on the quarter to obtain the best of their figure and stripe, but which are too small in girth to be so cut. The stay-log is first flitched as already described, and then attached by coach-bolts to a heavy beam (the stay-bar). Revolved against the knife as shown in Fig. 6, veneers are removed from what are approximately radial faces of the flitch, and in widths considerably greater than could be got even by flat cutting. The operator must always be careful, in this process, to stop before the knife reaches the fixing bolts.

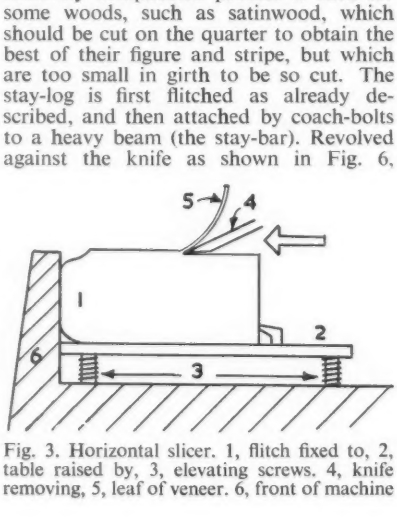


Fig. 3. Horizontal slicer. 1, flitch fixed to, 2, table raised by, 3, elevating screws. 4, knife removing, 5, leaf of veneer. 6, front of machine

Drying the Veneers. Once the flitch has been converted into veneer by any of the means described, the leaves must be dried to prevent discoloration and decay; and at this point it is convenient to bring in the question of *sequence*. As the veneers leave the machine they must, as an invariable rule, be kept in strict sequence through all the operations to follow. If this is not done they will not match when laid together in various patterns to form a decorative panel.

Drying can be done in a variety of ways. Perhaps the most common for decorative veneers is simply to spread them out on racks round which fresh air can circulate. Another way is to pass them through a warm room or tunnel, either spread on racks or suspended from pegs, and the third way is to use one of the large mechanical driers (developed for constructional veneers in plywood mills) where the leaves are carried between two sets of rollers or belts from one end of a chamber to the other in carefully controlled conditions of heat and moisture.

The time required for drying may vary from two to ten days with the first method (depending upon the weather conditions) to ten to twenty minutes with the last. Whatever the method, the veneer must be dried sufficiently to preserve it in good

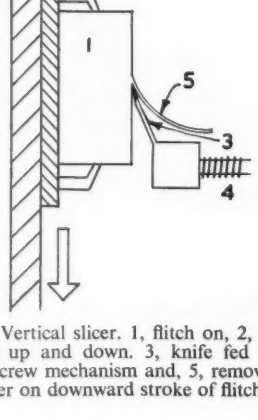


Fig. 4. Vertical slicer. 1, flitch on, 2, carriage moving up and down. 3, knife fed forward by, 4, screw mechanism and, 5, removing leaf of veneer on downward stroke of flitch

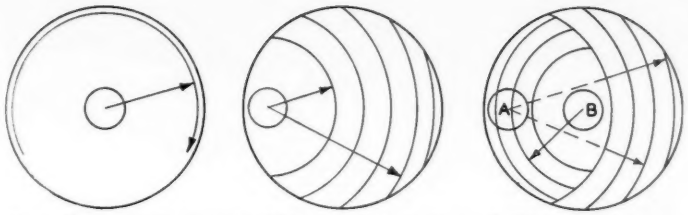


Fig. 5. Peeling. Left, normal. Middle, eccentric (half-round). Right, double eccentric. A, first centre; B, second centre

condition but not so much as to render it too dry, brittle and buckled. Some woods require special treatment and must be rushed to the drier as soon as cut to prevent deterioration. The whole operation needs great attention to detail, experience and patience; if it is not done properly valuable material can be seriously damaged or ruined.

Veneer Trimming. The dry veneer is ragged in appearance and may contain defects which it was not possible to remove during flitching. The veneers are therefore made up into bundles and trimmed on a large guillotine, thus both enhancing their appearance and removing useless wood. The bundles are then counted, numbered, tied and then piled in their correct order, still preserving the strict sequence of the individual leaves.

Selection of Veneers. This is the job which is of most concern to the architect. We have already said that no two logs are quite alike. Therefore, when a scheme using decorative veneers is being considered, it is not enough to have just a *kind* of wood in mind. The architect should insist on seeing *for himself* the actual stock of veneer from which it is proposed to make the panels. The whole atmosphere of a room can be altered by using one stock instead of another, although they may be of the same species, and time spent on this selection is very seldom wasted, because the architect can put his finger on *exactly* what he wants and needs to achieve the effect he has in mind.

It may well happen that minor adjustments may have to be made to the general lay-out of a wall treatment for example, because there are woods with very definite characteristics which resent summary application. Some just cannot be used for 'lay grain' panels, others can be used equally well vertically or horizontally. If a careful study and selection is made at a sufficiently early stage in the job, however, any adjustments needed can, in ninety-nine cases out of a hundred, be made with little difficulty and the architect has the satisfaction of using the wood of his choice to the very best advantage.

The business of selection inevitably raises the question of samples. Samples—no matter how carefully they are chosen—can never be as good as seeing the stock itself or a full-size panel made from it. At the worst, they can be definitely misleading. It is quite possible, for example, to cut six or eight small samples from a single leaf of walnut, and they would all be quite different from each other and, even considered together, quite incapable of conveying the appearance of the original leaf. Samples are often useful for questions of colour and tone value, but to try to make them do more is putting too much of a strain upon them.

Specification of Veneers. Assuming that the architect has seen and approved a stock of veneer for a job, he is then well-advised to specify that veneer in the bill of quantities, quoting the name of the supplier and the stock (or other) identifying number. That done he knows exactly what he will get. If the stock is *not* specified, but left open as a type of wood, then the problem of controlling the result becomes very much more difficult. The various contractors tendering for the job will all put their own interpretations upon it, and the architect then has the task of considering a number of possibilities—none of which may fully satisfy him—and in all probability the selection will have to be based upon samples.

It is sometimes said that if the architect specifies a stock this eliminates 'healthy' competition. That is nonsense. All it means is that the competition has taken place one stage earlier and that the architect has used his own judgment instead of delegating it (very largely) to the panelmaker. It also means that the process of selection has taken place before quite a considerable number of people have spent time and labour over detailed estimates; one unknown quantity has been removed by the time the estimate stage is reached.

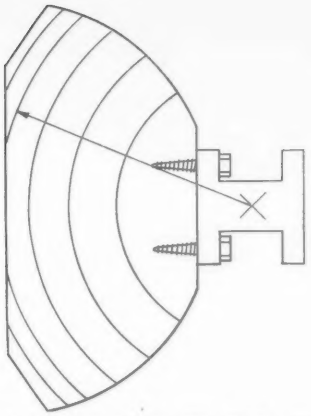


Fig. 6. Stay-bar cutting. The flitch revolves about the centre marked ×

Reliable merchants take pride in the service which they offer the architect, and he in turn can be sure of obtaining the widest possible range of choice and any advice that is required. His decision once made, he can relax; he knows exactly what he will get and need not even entertain the proffered 'just as good'.

An example of veneering, showing its adaptability for the clothing of columns and difficult shapes

'Houses 1953'

Third Supplement to the Housing Manual, 1949

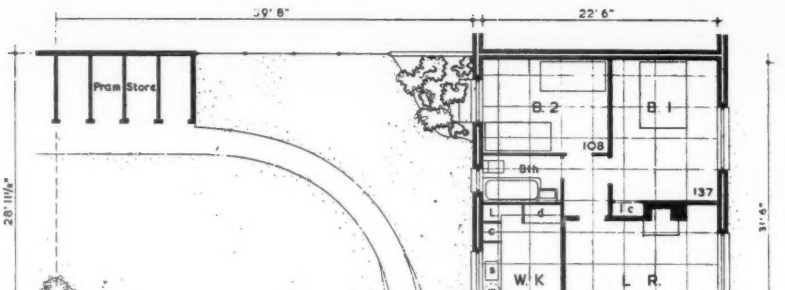
IN *Houses 1952* the Ministry of Housing and Local Government indicated means of reducing capital costs and rents, and a selection of plans was illustrated showing how space and materials could be saved without loss of standards or amenity. The new *Houses 1953* shows new opportunities for important economies in the use of land and in its development. In a foreword to the booklet the Minister says that it 'shows new ways of saving labour and materials, and adds a third and vital element—saving land'. 'Badly planned estates may mean untidy development, needless roadwork, more costly services, urban sprawl, long walks to shops and schools, traffic danger to children and waste of land. The estate lay-out and the house designs should be planned together from the start. *Houses 1953* seeks to show how this forethought can produce attractive yet economical schemes, better integrated with the towns they serve and more jealous in their regard for the land they use.'

Part 1 of the booklet deals with house and flat plans; Part 2 with the integration of house plans with lay-outs; Part 3 with roads and services, design and construction; Part 4 gives lay-out studies for an actual site. Appendix A contains a table showing savings in weekly rent for various savings in capital cost at different rates of interest; Appendix B gives some details of house design, fittings and equipment; Appendix C deals with stabilised soil for road base construction; and Appendix D with tenants' meeting rooms. There are illustrations of house and flat plans, lay-outs, and photographs of houses.

The introduction states that the booklet emphasises the need to raise densities and reduce development costs by better integration of house design and lay-out, a subject which 'has not received sufficient attention'. 'The purchase of land, the construction of roads and sewers, and the building of houses, are three distinct operations carried out at different times. As a result the cost of each item is often considered in isolation. But the total cost of all three largely determines rents. Therefore it follows that economy in the use of land, in the construction of roads and services, and in the cost of land must constantly be kept in mind *from the start*.'

Although the concept of planning the estate lay-out and the house designs together from the start may not be an entirely new idea to housing architects, they will no doubt be interested in studying the suggestions put forward for saving land, and the following summary of the booklet is mainly directed to that aspect.

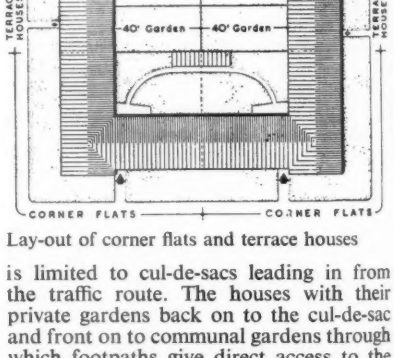
Broadly speaking there are three basic types of estate development: (*a*) the conventional or corridor street lay-out; (*b*) the service cul-de-sac, and (*c*) the footpath access lay-out.



Ground floor plan of two-storey corner flats, with communal garden, linking parallel terraces 80 ft. apart

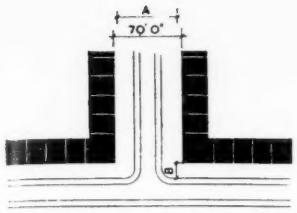
The Conventional or Corridor Lay-Out. Whether access to the gardens is by common passage, side passages or through the house the effect is to increase the amount of frontage needed per house. Analysis of a number of post-war housing schemes designed on these lines and with two-storey houses shows that the total road frontage exceeds the total building frontage by an average of 13·8 ft. per house. As 6 ft. of road frontage costs about £25, there is an opportunity of saving some £50 a house on development costs. The average net density of the schemes analysed is only 47 habitable rooms per acre, as against the 65 referred to in the *Density of Residential Areas* (H.M.S.O. 1952.5S). But in one conventional lay-out the excess of road over building frontage is brought down to 2·83 ft. per house, with a net density of over 61 habitable rooms per acre. If by other forms of lay-out the increase in net density from 47 to 62 were extended over an annual programme of 300,000 houses, assuming an average of four rooms a house, over 6,000 acres of valuable land would be saved without detriment to the living-space or to the appearance of the estates.

Service Cul-de-Sac Lay-Out. This type of lay-out was developed in America to save residents from having to cross traffic routes to reach schools, shops and other amenities, thus all main traffic is confined to peripheral roads, and road access to the houses is limited to cul-de-sacs leading in from the traffic route. The houses with their private gardens back on to the cul-de-sac and front on to communal gardens through which footpaths give direct access to the schools, shops and amenities without crossing the road, as exemplified in the lay-out of Baldwin Hills village, Los Angeles, U.S.A. There is as yet insufficient evidence to prove whether the service cul-de-sac type is more economical than the conventional or other types, because of the cost of providing and maintaining the footpaths and common gardens at the front of the houses, but if frontage is gained at the end of the cul-de-sac and the roadways are built to a light specification and without footpaths, a substantial economy is possible.

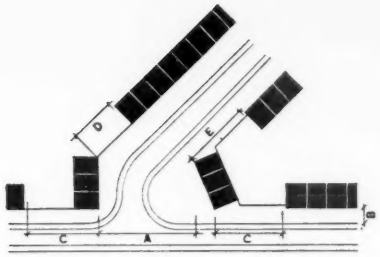


Lay-out of corner flats and terrace houses

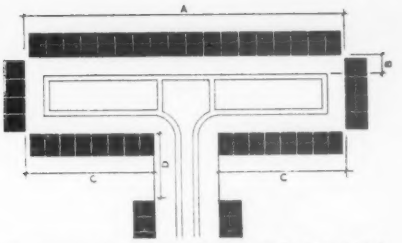
The cul-de-sac should be considered and constructed as part of a housing precinct; the traffic using it is small in amount and slow moving. As the houses are served by a front footpath there is no need to provide footpaths at the back unless the carriage-



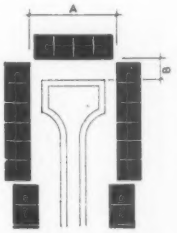
Frontage losses. A, 62 ft. 2/B, 30 ft. Total, 92 ft.



Frontage losses. A, 97 ft. 2/B, 30 ft., 2/C, 137 ft. D, 46 ft. E, 67 ft. Total, 377 ft.



Frontage gains. A, 350 ft. 2/B, 40 ft. 2/C, 280 ft. less 2/D, 140 ft. Net total, 530 ft.



Frontage gains. A, 85 ft. 2/B, 40 ft. Total, 125 ft.

way is only 9 ft. wide, when a 4 ft. 6 in. footpath on one side might be desirable.

Footpath Access Lay-Outs. There are two forms of this type; in both the houses are sited at right-angles to the road and are approached by footpaths with a maximum distance of 150 ft. from the nearest road access. In the first form, advocated in successive *Housing Manuals*, the terraces of houses are arranged with their private gardens backing on to one another and concealed from public view by screen walls or hedges. Access to the back of the houses is either through the houses or at the side.

In the second form the terraces are provided with footpath access on both fronts, thus allowing narrower-fronted houses. Compared with the first form the houses and their private gardens can be more readily sited to the best orientation and more freely arranged in relation to one another and to the landscape. A table shows the reduced road frontage per three-bedroom terrace house according to various lay-outs.

Most of the plans in the handbook are designed to suit lay-outs in which secondary access is available to each house; other designs, including flats, are especially suited to higher densities in a conventional lay-out. The use of specially-designed corner blocks will increase densities and economise in the use of road frontage. The practice of designing blocks of flats for external corners and houses for internal corners could be extended. The accompanying illustrations taken from the booklet exemplify frontage losses and gains involved in the respective lay-outs.

Before the highway authority accepts from the housing authority responsibility for the maintenance of housing estate roads and footpaths, the basis of agreement between them rests largely on two publications, *Schedule of Suggested Minimum Street Widths* and *Recommendations for Construction Standards for Housing and Development Roads and Streets*. These publications were designed to meet the general traffic needs in conventional lay-outs, but if houses and footpaths are sited at right angles to the road or if footpaths are separated from the carriageway, the full widths of footpaths recommended in the Schedule may not be necessary, and Part 4 of *Houses 1953* illustrates lay-outs in which variations from the Schedule would be justifiable.

Regarding turning-spaces, the booklet states that a turning-circle must be at least 60 ft. in diameter to accommodate commercial vehicles and furniture vans; T, L and Y shapes are more economical than circular ones.

Recent advances in road construction technique can effect site economies, such as the employment of soil stabilisation. In an actual example, a road with a soil-cement base 6 in. in depth with 1-in. gravel asphalt surface worked out at 12*s.* 0½*d.* per sq. yd. as against 16*s.* 4½*d.* for a 6 in. mass concrete road. Taking the average road area in current schemes of 378 sq. ft. per house, the saving in the example quoted would be over £9 a house, which is equivalent to a reduction of 2*d.* a week in rent.

Road gulleys are expensive and should be used sparingly. A minimum area of 2,000 sq. ft. to each gulley is suggested, and by giving the road surface a slight cross fall, instead of a camber, gulleys can be on one side only of a road, thus economising in pipe-laying.

For house drainage, gradients of 1 : 40 and 1 : 60 for 4-in. and 6-in. pipes need not be adhered to rigidly. On hilly ground steeper gradients can be allowed parallel with the surface instead of using expensive drop manholes. Elsewhere flatter and self-cleansing gradients are possible provided they bear relation to the maximum rate of flow; 4-in. pipes can be used for a private sewer and, with a minimum gradient of 1 : 60, up to eight houses on the separate system can be connected to it; 9-in. pipes for all foul sewers are unnecessary.

Concrete bedding and haunching of house drains and private sewers can be omitted where trench foundations are good or the pipes are bedded on sand, provided the drain or sewer is not crossed by traffic and back filling is carefully carried out. An excessive number of manholes is a common item of extravagance; they are essential only at the upper and lower ends of a private sewer and at changes in its direction. With the single pipe system of plumbing in the houses the external drainage will cost less than with the two pipe system.

Appendix B considers some details of house design, fittings and equipment on which advice was given in the *Housing Manual 1949*. The intervening four years make it possible to assess its acceptability to local authorities and their tenants, and widespread practice suggests that the following revisions could be made.

Staircase. Assuming 8 ft. 3 in. from floor to floor, a rise of $7\frac{8}{13}$ in. is acceptable.

Bathroom. The minimum between structural walls can be reduced from 4 ft. 9 in. to 4 ft. 6 in., thus allowing the adoption of a 3-ft. preferred dimension.

W.C. One in dwellings for five persons or less is now accepted. In five-person households it should be in a separate compartment, but for smaller households it may be in the bathroom.

Storage. Storage space of 50 sq. ft. minimum should be provided in urban areas, and this may contain the fuel store; but if the store is to be used as a washhouse the fuel store should be separate.

Cupboards. At least one cupboard should be provided on each floor, and these should be to B.S. sizes.

Washhouse sinks. In dining-kitchen houses, a second sink is not generally wanted.

Lavatory basins. In bathrooms of reduced width it has often been found to be more convenient to install a basin 1 ft. 10 in. wide and 1 ft. 4 in. across.

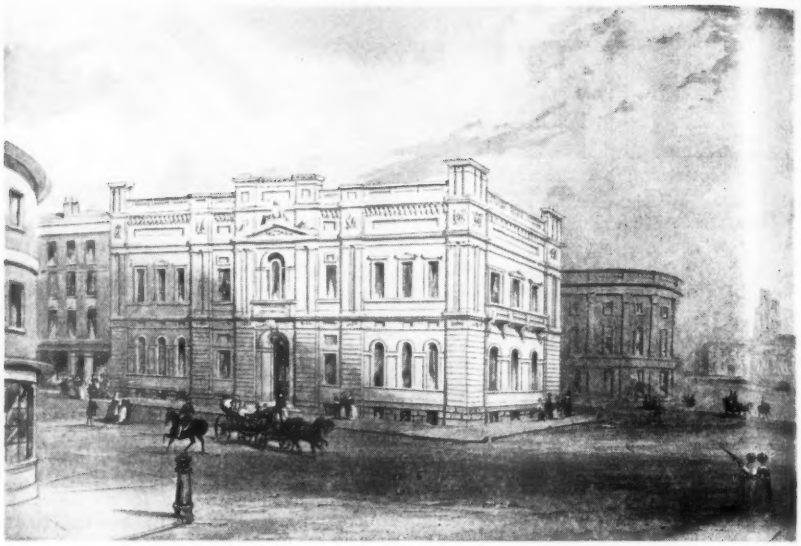
Appendix D is concerned with tenants' meeting rooms, for which local authorities may be asked by tenants or their associations. Such meeting rooms fulfil a different function from those of community centres and are in no sense a substitute for them. A reasonable provisional assumption is that a meeting room to accommodate 50 or 60 persons would be appropriate for an estate of some 400 houses with about 1,500 population.

Many types of prefabricated buildings can easily be adapted and should be used while bricks are short, in preference to specially-designed brick buildings. One advantage of such buildings is that they can easily be extended.

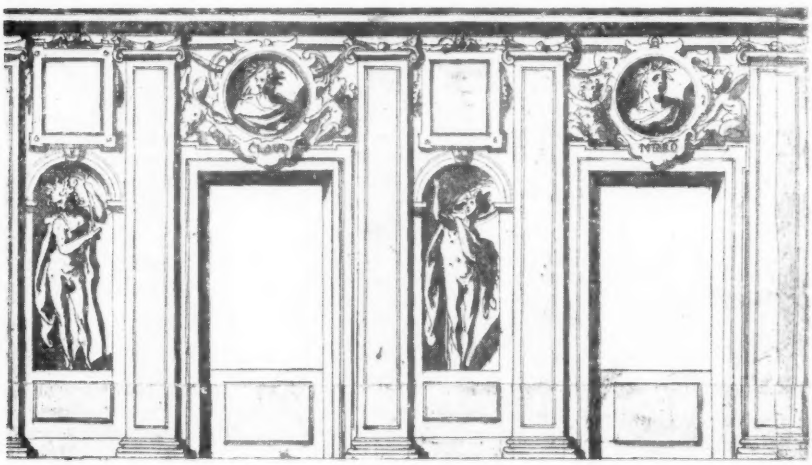
Houses 1953 is published by H.M.S.O., price 3*s.* net.

More Unidentified Drawings from the R.I.B.A. Library

A second selection of unidentified drawings from the R.I.B.A. Library's collection is herewith presented to the readers of the JOURNAL in the hope that either the subjects of the pictures or the authors of the drawings may be identified. The Librarian will be grateful to have suggestions.

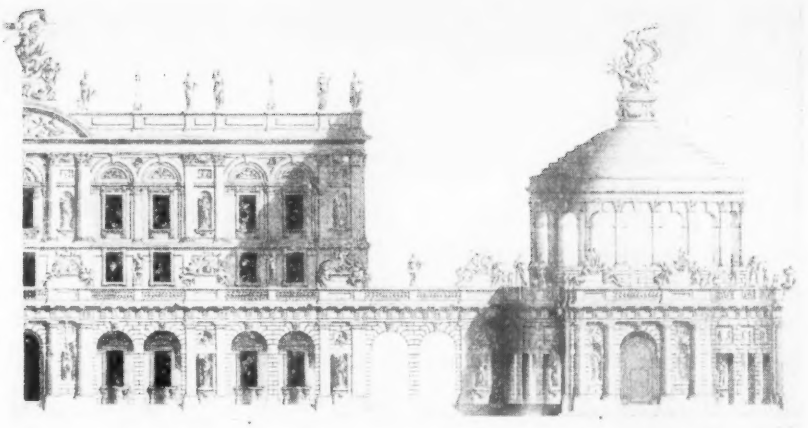


Above, a building no longer (if ever) in existence, within sight of the Church of St. Mary Woolnoth in the City of London, apparently at the corner of King Street. The building's exact locality and identity are sought and the identity of the architect or artist.

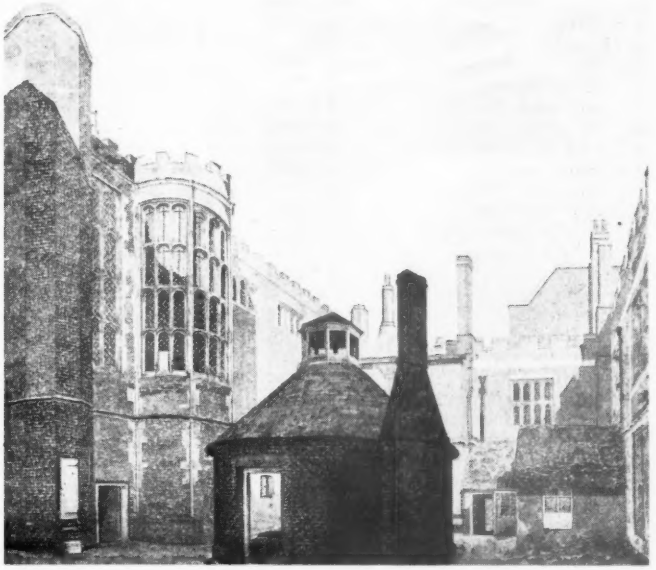


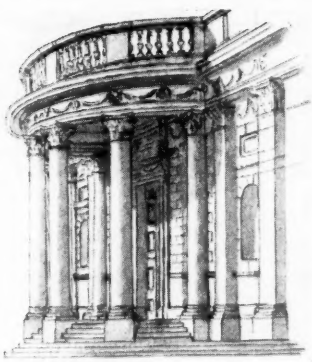
Left, two sections of an Italian interior (on Florentine paper *circa* 1670). It could have been a temporary setting for some display. Names of building and draughtsman are wanted. Above, doorway to a Chapel of St. Silvestro. Does any member by chance know where is this chapel and who was the author of this 18th-century Italian drawing?

Right, an 18th-century French drawing, showing an extension to a palatial official building. Identification of the building may give a clue to the author of this able drawing



Middle right, the Round-Kitchen Court at Hampton Court Palace, by one of the early English water-colourists. Who was he? Below left, a triumphal arch. Where, if ever, was it erected and who was the designer? Chambers or Yenn has been suggested





Above, one of two drawings, late 18th century, French or English, showing porticoed building. Building and artist unknown. Right, one of a series of designs for M. Perregaux, perhaps proprietor of the 'Cercle des Etrangers', Rue de Richelieu, Paris. Paper *circa* 1750. Who was this French architect or interior decorator with a flair for garden design?

Review of Construction and Materials

This section gives technical and general information. The following bodies deal with specialised branches of research and will willingly answer inquiries.

The Director, The Building Research Station, Garston, near Watford, Herts.
Telephone: Garston 2246.

The Officer-in-charge, The Building Research Station Scottish Laboratory, Thorntonhall, near Glasgow.
Telephone: Busby 1171.

The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks.
Telephone: Princes Risborough 101.

The Director, The British Standards Institution, 2 Park Street, London, W.1.
Telephone: Mayfair 9000.

The Director, The Building Centre, 26 Store Street, Tottenham Court Road, London, W.C.1.
Telephone: Museum 5400 (10 lines).

The Director, The Scottish Building Centre, 425–7 Sauchiehall Street, Glasgow, C.2.
Telephone: Douglas 0372.

Carlite Vermiculite Plaster. The flood of advertising matter that pours into architects' offices almost gives the impression that a new material or a new technique is being brought out each week, and it is hard to visualise the days of long ago when the materials and techniques applicable to building were few and the respective craftsmen were able to gain the intimate experience learnt from working with a few materials. Now there is a multiplicity of materials each serving much the same purpose but each having its own peculiarities which require humouring if the best results are to be obtained. It is therefore not surprising that there is now a tendency to look to 'factory-made' as a solution of the difficulties associated with mixing on the site, where the final product and its proper application depend on the skill and conscientiousness of hundreds of craftsmen working on hundreds of sites. Ready-mixed concrete is a case in point, where it is contended that concrete mixed in a factory under controlled conditions may be expected to give a more constant and reliable result than it would if it were subject to the varying conditions of mixing on the site.

Such arguments may be extended to plastering, a craft in which the skill and experience necessary to produce a first-class job are perhaps as great as in any other trade. But if a correct mix is essential then the problem of variations from site to site is important, as it is in the case of concrete. The Code of Practice, C.P. 211: 1949 *Internal Plastering* evidently had this point in mind, for it says 'The materials used in the preparation of plastering mixes are normally measured by volume by means of gauge-boxes. It should be realised, however, that considerable variations in mix proportions are possible with this method. Dry hydrated lime and cement may vary in bulk density, according to whether the material is in a very loose condition or is partly compressed due to storage 'packing'. Variations may also occur due to the amount of shaking down when filling the gauge-box. Gypsum plasters, even of the same type, vary considerably in their bulk density, while the bulk density of sand can be affected both by its grading and moisture content'.

Carlite plaster is a 'factory-made' material composed of exfoliated vermiculite as an aggregate and hemi-hydrate gypsum (hardwall) plaster as the binding agent, with a retarder giving suitable setting times. The ingredients are pre-mixed in the factory, and on arrival at the site only the addition of water is needed to make the plaster ready for use. The advantages claimed for this machine-mixing at the factory are several; the quality, grading and density of the vermiculite, and the mixing proportions, can be carefully controlled; the need for proportioning each mix on the site is eliminated, thus tending to greater output on the job; and as the setting times of the undercoats are controlled at the factory any danger there might be of irregular setting times due to sand variations in sanded plasters is avoided. From the contractor's point of view storage on the site is simplified and there is no need to hoist large quantities of sand or gauged plaster.

The good qualities of exfoliated vermiculite for thermal insulation and for fireproofing are well known; the thermal conductivity (symbol k) of vermiculite plaster is given as 1·8 to 2·0, as against 4·5 for sanded plaster. Carlite plaster is approximately two and a half times lighter than sanded plaster, and this allows lighter lathing to be used; weight figures quoted are 114 lb. for one cubic foot of sanded plaster and 40 lb. for Carlite.

Fuller particulars may be obtained from the makers, the Gotham Company Ltd., Bentinck Buildings, Wheeler Gate, Nottingham.

A New Glass Door. The transparent and strengthened 'Armourplate' glass door, manufactured by Messrs. Pilkington Brothers, Ltd., is well known and is to be seen as part of many modern shop fronts. Messrs. Pilkington have now introduced a glass door called Armourcast, intended for interior use only, which is translucent but not completely transparent, thus privacy is maintained but persons approaching the door on either side can be seen sufficiently distinctly to avoid threshold collisions. This partial transparency is effected by giving one side a rough dappled surface which is recommended to be on the inside.

Messrs. Pilkington's Armourcast door

The glass is toughened ⅜-in. rough cast and the door is wholly glass, with the exception of the B.M.A. hinges and, if desired, a self-closing fitting. The melting point is about 1000 degrees C. Stock sizes are 78 in. high by 30 in. or 33 in. wide; other sizes can be made to order. The accompanying illustration shows the door and demonstrates its transparent-translucent qualities.

Messrs. Pilkington's address is St. Helens, Lancashire, and Selwyn House, Cleveland Row, London, S.W.1.

Window Opening Gear. It is an aphorism that it is the little things in life which count, and it is almost equally true in architectural practice. It is a comparatively little matter to arrange for the opening of ventilators in one or two rather tall windows, but it is not quite so little when it involves 6 miles of ventilators in continuous ranges 250 ft. long, as at the Ford factory at Dagenham.

Anyone faced with a window opening problem, big or little, would do well to study Messrs. Henry Hope and Sons' catalogue of gearing (list No. 267 of July 1953) in which all sorts of opening gear are described and illustrated, from the simplest to the most complex, for operation by hand, by oil from a motor-driven pump, or by electricity. Externally operated gear, as installed at Lloyds Bank, Exeter, keeps the interior clear of rods and lever arms, and in buildings subject to fire regulations the quick-release fusible link gear will be of service.

Those who wish to know the possibilities in gearing technique may obtain the catalogue from Messrs. Henry Hope and Sons, Ltd., of Smethwick, Birmingham, or 17 Berners Street, London, W.1.

British Electrical Development Association. On the 5th of this month Sir Henry Self, President of the Association, opened the new B.E.D.A. testing house at Leatherhead, established by the Association in 1947 to

furnish reports on apparatus submitted to the Advisory Committee on electrical appliances and accessories set up jointly by B.E.D.A. and the British Standards Institution. All sections of the industry and users are represented on the committee. The test house carries out tests on appliances from the standpoint of safety and performance; a task for which the building and the testing apparatus are admirably adapted.

At the request of the Ministry of Fuel and Power the British Electrical Development Association have issued List No. 1, May 1953, giving names and details of domestic electrical appliances which have been technically approved by all Area Electricity Boards, and it is recommended that appliances for housing accommodation should be selected from this list; it is further suggested that housing authorities and other interested persons should consult their local Electricity Board for advice on the appliances best suited to their requirements. The Ministry of Housing and Local Government recommend that any electrical appliances installed in houses should be limited to those in the list.

The list can be obtained free from the British Electrical Development Association, 2 Savoy Hill, London, W.C.2.

District Heating. Under this title the Heating and Ventilation (Reconstruction) Committee of the Building Research Board, D.S.I.R., have published Post-war Building Studies Nos. 31 and 32. The first volume, No. 31, contains five parts; 1, general report; 2, survey of district heating practice abroad; 3, memorandum on suggested scheme for the Duddeston and Nechells redevelopment area of Birmingham; 4, memorandum on district heating as applied to small housing estates, and 5, the heat pump, with particular reference to district heating from thermal-electric stations.

The second volume, No. 32, contains Part 6, and records a detailed investigation of a district heating scheme, called the 'basic scheme', in which the assumptions made are set forth with the detailed calculations based on those assumptions.

Among the Conclusions in Chapter 7 of Part 1 it is stated that although heat transmission may be by steam or hot water the last is generally more suited to British conditions, though in special circumstances steam may be preferred. In urban areas district heating by either thermal or thermal-electric methods can compete successfully in cost with all other forms of heating, and there are also indirect savings which weigh in favour of district heating, apart from the improvement in living conditions which it can bring.

The two Studies are published for the Ministry of Works by H.M.S.O., No. 31 at 7*s.* 6*d.* and No. 32 at 10*s.* net.

Rust and Scale Removal. In their JENOLITE NEWS Messrs. Jenolite publish a letter from a layman—we will call him Mr. H.—which may interest architects whose advice is sought on removing rust and scale from a hot water system. Mr. H. was getting only a trickle of water from the hot water tap in the bathroom and kitchen; he called in his local plumber who diagnosed bad corrosion of the pipes and said they needed renewal at an approximate cost of £18. Mr. H. did not accept this estimate and decided to experiment; he took off the inspection plate from the hot water storage tank, plugged the inlet pipe, disconnected the pipe from the cistern in the loft and poured into this pipe four parts of hot water to one of Jenolite. After an interval of half an hour Mr. H. opened all taps and was amazed at the amount of rust and scale that came out. He flushed out the system with clean water, connected up again and 'now the pipes are as good as new at a cost of a few shillings only'. It would seem that Mr. H.'s faith in his own practical wisdom and the efficacy of Jenolite was justified.

Messrs. Jenolite are specialists in de-rusting and rust-proofing. Their address is 43 Piazza Chambers, Covent Garden, London, W.C.2, and Jenolite House, 304 High Street, Glasgow, C.4. They state that they receive many inquiries regarding the possibility of removing rust and scale from hot water systems by jenolising.

Another rust-remover is marketed by the Plus-Gas Co. Ltd., of Plus-Gas House, 89 Cromwell Road, London, S.W.7. Their anti-corrosion fluid Plus-Gas formula A removes rust and their formula B protective fluid is designed to give a tough, flexible and transparent film which will resist corrosion and will allow for expansion due to temperature variation.

Gifford-Udall Prestressing Jack. This new jack has been developed by Messrs. Udalls and Messrs. Cable Covers Ltd. The Gifford-Udall-CCL prestressing system allows the wires to be tensioned individually, enabling the jack and pump to be combined into one compact appliance weighing about 56 lb. The jack will tension any size of wire up to 0·276 in. and for post-tensioned work the wires can be arranged in groups of up to 12 wires in each duct. The wires are anchored by standard CCL anchor grips and for post-tensioning these grips bear against mild steel plates at the end of the concrete member. If future extension of the wires is anticipated spring-loaded anchor grips can be supplied. In pre-tensioned work the grips are recoverable. Extension is measured against an adjustable rule and the load on a direct reading gauge. It is claimed that one man can tension and anchor at the rate of 20 wires an hour.

Full information can be obtained from Messrs. Cable Covers Ltd., Prestressed Concrete Division, St. Stephen's House, London, S.W.1.

Solid Fuel Appliances. The Coal Utilisation Council have issued their list No. 7, July 1953, of recommended domestic solid fuel appliances, prepared in consultation with the Ministry of Fuel and Power. This list cancels list No. 6, of January 1953. The address of the C.U.C. is 3 Upper Belgrave Street, London, S.W.1.

A totem pole at the forthcoming Building Trades Exhibition, modelled by Mr. Barney Seale, will be a novel feature

Totemism at the Building Exhibition. As the exhibition next month will mark the silver jubilee of the Building Trades Exhibition, Messrs. Silexine Paints Ltd. thought it would be amusing to display something a little out of the ordinary on their stand, namely a totem pole 22 ft. high carved with motifs based on those of North American, African and Polynesian native carvings. It has been designed by Mr. Barney Seale, F.R.B.S., R.B.A., F.R.S.A.

A totem pole at such an exhibition is not really so out of place as it may at first appear, because a totem pole represents the totem of a tribe, either symbolically or realistically, and—according to the *Encyclopaedia Britannica*—totemism is a systematic association of groups of persons with species of animals (occasionally plants or inanimate objects) connected with a certain amount of social organisation.

Groups of persons and social organisations will be much in evidence at the exhibition and Silexine paint may be considered to be an inanimate object, although Messrs. Silexine would no doubt say that, though inanimate, their paint can speak for itself.

British Standards Recently Published.

B.S. P.D. 420 : 1953. **Recommendations on methods of protection against corrosion for light-gauge steel used in building.** This Standard deals with the protection of mild steel components not exceeding 10 S.W.G. (0·128 in.) in thickness used in general building construction.

B.S. 2017 : 1953. **Copper Tubes for General Purposes.** This Standard is intended to meet the needs of general users who find it difficult to select suitable sizes from the dimensional tables in existing Standards and who may prefer to specify copper tubes by the outside diameter and thickness required.

Practice Notes

Edited by Charles Woodward [*A*]

THE MINISTRY OF HOUSING AND LOCAL GOVERNMENT. Sewage disposal for small groups of houses. Circular 45/53 refers to a memorandum on principles of design for small domestic sewage treatment works. It is hoped that it will assist housing and sanitary authorities who are faced with the necessity of providing, at reasonable expense, adequate sewerage for small villages or small new housing estates in places where it would be too costly, or otherwise impracticable, to drain the houses by comprehensive sewerage schemes serving wider areas.

The Department has been in touch with the Council for Codes of Practice for Buildings (Construction and Engineering Services) who have in preparation a British Standard Code of Practice for Small Sewage Treatment Works, to which the memorandum will be complementary.

In some places existing or proposed development is so scattered that it is neither necessary nor practicable for public sewers linking a number of houses to be laid at all. The provision of sewage disposal by the local authority will not therefore arise. Where individual householders will continue to be responsible for dealing with the drainage from their premises, there will often be need for improving the existing arrangements by, for example, the substitution of septic tank drainage for cesspools which may leak, overflow, or require frequent and costly emptying. It is believed the principles set out in the memorandum will be found useful for such purposes also.

The Memorandum on Principles of Design for Small Domestic Sewage Treatment Works is obtainable at H.M. Stationery Office, price 9d.

Houses 1953. Circular 54/53 dated 28 September refers to *Houses* 1953 which is a further supplement to the *Housing Manual* 1949. The Ministry commends the supplement to all housing authorities in England and Wales. The supplement is obtainable at H.M. Stationery Office, price 3*s*. net. For a summarised version see pp. 492–3 of this JOURNAL.

New Streets Act, 1951. Circular 56/53 dated 16 September refers to the difficulties which arise in connection with road charges payable under the Act, and the Minister thinks the following notes may be of assistance to local authorities in this connection.

1. Full weight should be given to the various exceptions allowed by section 1(3) of the Act. Where the local authority enters into an agreement with a builder for making up the road under section 146 of the Public Health Act 1875, no charges are payable under the New Streets Act, section 1(3)(*d*). Local authorities also have some discretion in appying the exceptions in section 1(3)(*e*)(*f*) and (*h*).

2. Where a builder, after paying or securing the charges required by the Act, carries out work in the road which may be expected to reduce the ultimate cost of making up (for example, the provision of a satisfactory foundation or sewers) it may be reasonable for the local authority to take account of the value of the work done from time to time and to refund part of the charges accordingly. Section 2(3) of the Act enables a local authority to serve a further notice substituting a smaller sum, and the Minister is advised that such a notice can be served at any time.

3. The Minister is advised that where a builder has deposited plans for a number of houses in a street and is not going to start them all at once he need only pay or secure the charges in respect of particular houses as and when they are due to start. Local authorities are asked to make this clear where necessary.

4. Certain local Acts require new streets to be constructed in accordance with byelaws before buildings are erected. It should be noted that section 9 of the Local Government (Miscellaneous Provisions) Act 1953 now provides that in such cases the sum required to be paid or secured under the New Streets Act shall be calculated as if this work had been carried out.

5. In cases where difficulty is encountered in depositing or securing the charges required by the Act, and the local authority are making an advance for the construction of the house under section 4 of the Housing Act 1949, they may be prepared to assist by adding to the advance a sum in respect of the charges.

The Minister feels sure that local authorities will wish to administer the Act with due regard to individual circumstances and to take advantage of such facilities as the Act allows to prevent interference with the housing effort.

(This Circular is obtainable at H.M. Stationery Office, price 2*d*.)

Housing. Electrical Appliances. Circular 57/53 dated 30 September refers to a list of tested electrical appliances which have been technically approved by all Area Electricity Boards. The Circular recommends that any electrical appliances installed in houses should be limited to those in the list. Consultations with the local Boards are advised so that the appliances best suited to the particular housing scheme may be obtained.

The list in the form of a booklet is obtainable from the local Board or from the British Electrical Development Association, 2 Savoy Hill, London, W.C.2.

Water, England. The Minister has made the Water Byelaws (Extension of Operations) Order 1953, extending the time within which byelaws for the protection of water against pollution may be made by statutory water undertakers until 30 September 1955. (S.I. 1953, No. 1359, obtainable at H.M. Stationery Office, price 2d.) Existing byelaws will be effective until the above extended date.

HISTORIC BUILDINGS AND ANCIENT MONUMENTS ACT 1953. This Act received the Royal Assent on 31 July last, and provides for the preservation and acquisition of buildings of outstanding historic and architectural interest and their contents. It also amends the law relating to ancient monuments and other objects of archaeological interest.

Those who are interested in this subject will find a consideration of the provisions of the Act in THE JOURNAL OF PLANNING LAW for October 1953.

RECTIFICATION OF CONTRACTS. In the NATIONAL BUILDER for September there is an interesting article on rectification as applied to building contracts. It is explained that rectification is an equitable remedy which can be applied by the Courts where there has been a verbal agreement which has been reduced to writing and the written contract, by reason of a mistake, does not substantially represent the real intention of the parties. How this remedy can be applied to building contracts is not clear, as the builder usually has a complete set of documents at the time of tendering and the contract will be contained in those documents together with the formal agreement which is executed after the tender has been accepted.

The R.I.B.A. Form of Contract provides for the rectification of errors in description or quantity which are to be treated as variations. This may result in either an addition to or an omission from the contract sum. Errors in the builders' prices would not usually be a matter for rectification, but errors in the multiplication of those prices may be a different matter. It is suggested in the article in the NATIONAL BUILDER that if the contract has been entered into without the building owner being aware of the mistake in multiplication, the builder can be held to his lump sum price for at least the quantity of work specified. This could work either for or against either party to the contract, depending upon whether the multiplication was too little or too much.

Errors in the builder's prices may bind him in respect of the work included in the contract sum, but whether such prices can be applied to variations is not clear. It is usual for the priced quantities to be checked before acceptance of a tender and the article points to the necessity for this being done. The builder does not want to be over-paid and the building owner does not want to under-pay. At least that would be the general feeling.

NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY. Re-grading of Districts. The following is the List of Re-gradings authorised by the Council to take effect on and from 5 October 1953: *Yorkshire Region*, Wetherby R.D. (part) (Boston Spa, Bramham-cum-Oglethorpe, Clifford, Collingham, Thorpe Arch, Walton Wetherby, Wothersome), A2 to A1; *North-Western Region*, Llanfairfechan, Penmaenmawr, Bethesda, A3 to A2; *Midland Region*, Bingham R.D. (part) (Plumtree, Normanton-on-the-Wolds, Keyworth, Stanton-on-the-Wolds, Widmerpool, Knoulton, Owthorpe, Colston Bassett, Langar-cum-

Barstone, Granby, Cropwell Bishop, Cropwell Butler, Radcliffe-on-Trent, Bingham, Saxondale, Shelford, East Bridgford, Carcolston, Screventon, Scarrington, Aslockton, Hawkesworth, Thoroton, Tithby, Whatton, Elton, Orston, Flawborough, Sibthorpe, Shelton), Southwell R.D. (part) (Walesby, Boughton, Kirton, Egmanton, Weston, Grassthorpe, Sutton-on-Trent, Carlton-on-Trent, Ossington, Laxton, Ompton, Willow, Cromwell, North Muskham, Bathley, Caunton, S. Muskham, Kelham, Averham, Staythorpe, Rolleston, Fiskerton-cum-Morton, Bleasby, Southwell, Halloughton, Halam, Edingbly, Oxton, Epperstone, Thurgarton, Conalston, Hoveringham, Loudham, Caythorpe, Gunthorpe, Balcote), A1 to A; Stratford-on-Avon M.B., Oakengates U.D., A1 to A; Bingham R.D. (part) Hickling and Upper Broughton, Louth M.B., Church Stretton U.D., Mablethorpe and Sutton-on-Sea, Wellingborough R.D. (part) (Newton Bromshold), A2 to A1. The re-grading involves an increase in wages as from 5 October and in current contracts under the R.I.B.A. Form of Contract the net increase will be an addition to the contract sum.

DUSTBINS. In spite of the Local Government Act 1953, the vexed question of who is to pay for the provision of a dustbin is, apparently, not yet settled. Is it the landlord or tenant? If the local authority provides the dustbin the permissible charge under the new Act is five shillings per annum. If the local authority does not provide the dustbin a notice is served on either the owner or occupier of the premises to provide a dustbin. In a recent case such a notice was served on the owner's agents to provide a dustbin and the agents appealed against that notice. The evidence was that the net income from the property was about £5 per annum and a dustbin costs about 24*s*. 6*d*. The Magistrates declined to make an order requiring the agents to supply the dustbin and observed that the local authority could serve a notice on the tenant or provide the dustbin themselves and charge five shillings per annum. The tenant can appeal against the notice requiring the provision of a dustbin and the court may make such order as it thinks fit, and have regard to the terms and conditions, whether contractual or statutory, of the tenancy of the premises. If the local authority provide the dustbin it may still be that the annual charge would not be recoverable from either the owner or the occupier, because the court may make such order as it thinks fit.

LAW CASES

Perry *v.* Garner. (Public Health. Pests.) The occupier of a field was served by the local authority with a notice under Section 4(1) of the Prevention of Damage by Pests Act 1949, requiring him within 14 days to take the following steps for the destruction of rats on his land: '. . . poison treatment of the infested land . . . or other work of a not less effectual character . . .'.

A Divisional Court of the Queen's Bench Division held that by the inclusion in the notice of both specific and, alternatively, unspecific steps to be taken, the whole notice became unspecific and therefore was bad ((1953) 1 Q.B.D. 335.)

Gregory *v.* Fearn. (Estate Agent. Sunday observance.) *Per curiam:* an estate agent is not a 'tradesman or other person' within the meaning of the Sunday Observance Act 1677, Section 1, and therefore a contract entered into on a Sunday to employ an estate agent to effect the sale of land in consideration of the payment to him of a commission on the price obtained is not prohibited by that Section. (Court of Appeal. (1953.) 2 All E.R. 559.)

Book Reviews

Architecture, Essai sur l'Art, by *E. L. Boullée*. Boullée's treatise on architecture. *Helen Rosenau*, ed. 8½ in. ix + 131 pp. + pls. Tiranti. 1953. £1 1*s*.

The writings of Dr. Emil Kaufmann and of Dr. Rosenau herself have already made familiar to a wide public the work of Boullée and Ledoux, and the curious similarity between their designs and contemporary architecture, a similarity which prompted Dr. Kaufmann to entitle one of his books *Von Ledoux bis Le Corbusier*.

By editing the complete French text of Boullée's hitherto unpublished treatise, Dr. Rosenau has now made it possible for us to study the doctrine which formed the basis of Boullée's designs, and one is thus in a better position to assess the real affinity between Boullée and the modern movement in architecture.

From the beginning of the treatise it is evident that Boullée and the modern movement have one important thing in common, namely the influence of painting. Sigfried Giedion, in *Space, Time and Architecture*, has demonstrated the influence of modern painters on contemporary architectural design. Boullée introduces his treatise by stating that he is at heart a painter, and there is undeniably a picturesque quality about all his romantic, grandiose designs, many of which are published in Dr. Rosenau's edition.

Boullée is primarily interested in effects of light and shade, and considers architecture as a means of stimulating the imagination by use of the subtle interplay of surfaces. His views on lighting are remarkable for the period, although like so many of his ideas they were carried to rather extravagant lengths. His desire to hide completely all sources of natural light (a method of producing dramatic effects already exploited on a small scale in the baroque period) led him to design huge buildings with impracticable interiors and blank, forbidding exteriors. The funereal quality, however, of vast windowless surfaces was his deliberate aim. He delighted in the sculptural potentialities of large funeral monuments, trying to give every building the awe-inspiring sublimity of a mausoleum.

Boullée was affected by a megalomania common to many architects of the period such as Peyré the elder, Clérisseau, de Wailly, Ledoux and Lequeu—a characteristic particularly associated with the influence of Legeay. Their huge projects were usually so unpractical, both constructively and financially, that few were ever built, and the Arc de Triomphe de l'Etoile is one of the rare monuments to this passion for the enormous which survives. Nevertheless, the influence of this movement was very wide, and it is possible that the buildings erected under it in St. Petersburg have in some measure been responsible for the recrudescence of architectural megalomania in Soviet Russia.

Naturally, few of Boullée's schemes were ever constructed. But, as drawings, these gigantic edifices have an undeniable majesty, and remind one of certain types of film setting. It is not surprising that the popularity of such designs grew in the Napoleonic era, for they typify *par excellence* the Architecture of Dictatorship.

The ambitious size of such projects as his stadium, his anticipation of modern lighting methods and the influence of social philosophy on his designs, bring Boullée's thought in harmony with much modern writing on architecture. Like most men in advance of their times, he was strongly criticised by his contemporaries, but not all this criticism was purely reactionary. For not only the writings of Boullée, but those of his critics, are pertinent to the study of the architecture of the present day.

PETER COLLINS [*A*]

Electricity and productivity series, by the *British Electrical Development Association:* No. 1, **Higher industrial production with electricity;** No. 2, **Lighting in industry;** No. 4, **Materials handling in industry.** Each 8¾ in. text illus. [Lond. 1953.] 9*s*.

These books belong to a series dealing with the specialised application of electricity in industry. The first is a general review, and the others are practical rather than highly technical, being intended primarily to assist works managers and senior executives in keeping abreast of recent developments. Architects engaged in factory design also will find much valuable information, especially in volumes No. 2 and 4.

Architectural Detailing, by *Caleb Hornbostel* and *Elmer A. Bennett*. 11¾ in. xvi + 221 pp. incl. pp. of illus. New York: Reinhold; Lond.: Chapman & Hall. [1952.] £4 16*s*.

One hundred and sixty-five architectural details, chosen from the American magazine PROGRESSIVE ARCHITECTURE, have been arranged under two main headings: Building Types and Basic Details. The first section comprises details peculiar to one particular kind of building; the second is concerned with details appropriate to many types. This elegantly produced volume, conveniently indexed and cross-referenced, should provide a lively stimulus to flagging inspirations. Richard Neutra has written an entertaining introduction.

Modern Architectural Design, by *Howard Robertson.* 2nd ed. 8¼ in. 228 pp. incl. pls. text illus. Architectural Press. 1952. £1 5*s.*

A largely rewritten and reillustrated edition of a book published in 1932, this volume can be regarded as a sequel, both in its original and present form, to the same author's *Principles of Architectural Composition*, although it will also stand comfortably and independently on its own feet. Howard Robertson has always been associated with the modern movement in this country, but seldom with any of its fashionable cliques. His catholic appreciation of the better European and American architecture of today is revealed at once by the choice of photographs, and is logical enough in an architect who has drawn inspiration from many sources, while imparting to his own buildings an individual quality that few of his contemporaries display. Characteristically, the text is not just one more sermon on the immaculate virtues of modernism, but an unprejudiced analysis of some of the recognised principles in modern work, as they affect planning, structure, materials and, particularly, interior decoration.

Wren the Incomparable, by *Martin S. Briggs.* 9¼ in. 292 pp. + lxiii pls. text illus. Geo. Allen & Unwin. 1953. £1 15*s.*

This latest biography of Sir Christopher Wren sets out to be, in the words of the publishers, 'a comprehensive study of Wren's life and achievement as revealed by recent scholarship'. In that aim it has undoubtedly succeeded.

As was to be expected, it draws extensively on the old writings which every biographer of Wren must needs quote, the *Parentalia*, Evelyn's *Diary* and Hooke's *Journal*; but it also searches for more remote and less known references to Wren that throw new light on his character and quality, and it explores the somewhat indigestible mass of the 20 volumes of the Wren Society, to which it will compel many readers to return. Some, however, of the quotations of 19th-century critics, including Fergusson's strictures on the plan of St. Paul's and the high parapet wall, have but little value today and scarcely merit inclusion in such a volume as this.

After beginning with Wren's early years, the book deals with his turn to architecture and the Paris visit of 1665. A chapter on the fire of London and its consequences leads directly to Wren's work at St. Paul's. The City churches follow, although some of them preceded the Cathedral and were not without influence on its design. A series of chapters deals in sequence with work at Westminster Abbey, at Oxford and Cambridge, the royal houses at Kensington, Winchester and Hampton Court, the hospitals at Chelsea and Greenwich and the smaller buildings, among which are some of Wren's most delightful designs, the Abingdon Market House and Morden College, Blackheath, for instance.

Only after these several categories have been dealt with does the author attempt any general appraisal of Wren's place as an architect, or any description of his personal life as a man. Mr. Briggs recognises that this arrangement has disadvantages, but prefers it to any other. It may with some reason be thought that much of the two last chapters would have been more appropriately placed at the beginning of the book: an author is, however, entitled to his preferences. One is reminded again of the miracle of Wren's astonishing maturity in classical design, even in Pembroke College Chapel, which is now considered to be his first completed building. The Trumpington Street end may have 'the inevitable Corinthian pilasters'—not, be it said, so very inevitable in England in 1663—but there is here no indecision, no fumbling with half-digested detail. The cornice is the right projection, the pilasters are almost Palladian. In fact the whole design has many resemblances to the pedimented façade which Palladio added to Sansovino's church of S. Francesco della Vigna in Venice a hundred years earlier. The 'picturesque little cupola' of Pembroke owes nothing to Palladio, nor even to Inigo Jones. It is pure Wren, a forerunner of many delightful exercises in such features at Chelsea and Greenwich and Morden College.

The book as a whole is a tribute to the scholarship and industry of its author. Published by Messrs. George Allen & Unwin, beautifully printed in a pleasant fount of type which is easily readable, it is one that no lover of Wren can afford not to buy, even at the somewhat high price of thirty-five shillings. A small revision will be necessary in future issues to Plate XV*a* and *b* in the interest of accuracy, and perhaps some day room will be found for the plan of the Great Model and for the steeple of St. Vedast, Foster Lane, without which no book on Wren can be said to be complete. W. H. A.

Architects' Detail Sheets. A series of 96 *etc.*, edited by *Edward D. Mills.* 11½ in. × 8¼ in. 228 pp. incl. pls. and pp. of illus. Iliffe, for A. & B.N. 1952. £1 5*s.*

These scale detail drawings and photographs are a selection from those which have been published recently in the ARCHITECT AND BUILDING NEWS. They have been grouped under convenient headings: balconies, entrances and shop fronts, fireplaces; display, reception and domestic fittings; staircases, wall details, windows and so on. Most of the work shown is by British architects, but a few foreign examples are included. A useful feature is an English–French–German–Spanish glossary of the terms used in the book.

Economical Domestic Heating, by *Henry Gordon Goddard.* (Architectural and building series.) 8½ in. x + 150 pp. + 3 pls. text illus. Spon, 1952. £1 1*s.*

How to achieve comfort with economy in the average small house, especially the provision of satisfactory heating in new housing schemes, is the aim of this useful addition to Spon's Architectural and Building Series. The author has assembled the results of extensive research both here and abroad and summarised in simple language the more important points. He deals briefly with physiological needs, discusses the economic and planning problems to be faced, explains the importance of insulation, and devotes a chapter to ventilation and to each of the more commonly used heating systems, always keeping a particularly sharp eye on costs. The book concludes with some notes on district heating, the heat pump and solar heating. For those who require more detailed information a bibliography is provided.

Das Punkthaus im europäischen Wohnungsbau, by *Eduard F. Sekler.* (Dokumentationszentrum für Technik und Wirtschaft, Abhandlung, pt. 16.) 10 in. (iv) + 70 pp. (49) pls. Vienna. 1952.

Dr. Sekler, who will be personally known to many readers of the JOURNAL, has written a concise and carefully documented account of the evolution of the 'point-house' (point-block of flats) with particular relation to the economic and practical advantages of this type of dwelling, in the course of which he examines and illustrates some sixty examples from various European countries. An English summary of the book's contents is included.

Byzantine Mosaics, &c. (Iris (*or* Iris Colour) Books, *Hans Zbinder*, ed.) 16¾ in. 15 pp. + xiv pls. Batsford. [1952.] £1 10*s.*

The Iris Books have established a splendid tradition in the art of colour reproduction, which is worthily upheld by *Byzantine Mosaics.* This English version, printed in Switzerland for Messrs. Batsford, comprises fourteen plates of mosaics at Santa Maria Assunta, Torcello; St. Mark's, Venice; the monastery of Monreale, and other buildings at Palermo and elsewhere in Sicily. Explanatory notes on each and an introductory essay are contributed by Dr. Peter Meyer, the well-known architectural historian and art critic. J. C. P.

Correspondence

PIONEER WORK AT LETCHWORTH

The Editor, R.I.B.A. Journal.

SIR,—May I offer my congratulations on your delightful article in the September issue on the jubilee of Letchworth and to Miss Barbara Hill for her charming drawings. I hope many will read it, for I feel that insufficient praise has been given in the past to the pioneer work which was done at Letchworth and from which so many of us have benefited. Ebenezer Howard, unassuming and kindly, was a very great man; he was not contented that he had created Letchworth but started Welwyn Garden City in the same way with little or no money but with great faith. Unwin was a man with similar ideals and, together with his partner Barry Parker, created, perhaps not a masterpiece, but something homely for the people; and we hope that the same spirit is uppermost in the minds of those who are now engaged in performing a similar function in building our new towns.

Thank you for reminding us of Ebenezer Howard and two simple architects, Unwin and Barry Parker. It was most refreshing.

Yours faithfully,

ARTHUR W. KENYON [*F*]

Notes and Notices

NOTICES

Inaugural General Meeting, Tuesday 3 November 1953 at 6 p.m. The Inaugural General Meeting of the Session 1953–54 will be held on Tuesday 3 November 1953 at 6 p.m. for the following purposes:—

To read the Minutes of the Ninth General Meeting of the Session 1952–53 held on 23 June 1953;

Mr. Howard Robertson, M.C., A.R.A., S.A.D.G., President, to deliver his Inaugural Address;

To present the London Architecture Bronze Medal 1952 to Messrs. Farquharson and McMorran [*FF*] for the L.C.C. Phoenix School, Bow Road, E.3.

(Light refreshments will be provided before the meeting.)

The Building Exhibition. Olympia, 18 November to 2 December. The Building Exhibition will be held this year at Olympia from 18 November to 2 December. An admission card for the use of members of the R.I.B.A. is enclosed with this JOURNAL and is referred to in the Editorial note on page 469.

Formal Admission of New Members at General Meetings. New members will be asked to notify the Secretary R.I.B.A. beforehand of the date of the General Meeting at which they desire to be introduced and a printed postcard will be sent to each newly elected member for this purpose. On arrival at the R.I.B.A. on the evening of the General Meeting new members must notify the office of their presence and will then take their places in the seats specially numbered and reserved for their use. On being asked to present themselves for formal admission, the new members will file out in turn into the left-hand aisle and after shaking hands with the President (or Chairman) will return to their seats by way of the centre aisle.

Formal admission will take place at all the Ordinary General Meetings with the exception of the following:

3 November 1953: Inaugural General Meeting.

2 February 1954: President's Address to Students and Presentation of Prizes.

6 April 1954: Presentation of Royal Gold Medal.

Cessation of Membership. Under the provisions of Bye-law 21 the following have ceased to be members of the Royal Institute: *As Fellows;* George Alexander Allan, Leonard Rome Guthrie. *As Associates;* Ethna Devaney, Donald Campbell Dewar-Mills, John Duncan Grant, Alexander John George Lowes, Mary MacLaughlin, Maureen Millett, Thomas Derrick Oxley, Edward John Lindley Carstairs Steen, Bernard Trevallion, William Thomas Williams, Rachel Joan Wilson. *As Retired Licentiate;* Harold Gibson Walker.

CURRENT R.I.B.A. PUBLICATIONS

The following is a list of the main R.I.B.A. publications with their prices.

Agreement, Forms of
Form of Agreement for General Use between a Building Owner (including a Statutory Authority) and a Firm of Architects.
Form of Agreement between a Local Authority and a Firm of Architects for Housing Work.
Form of Agreement between a Local Authority and a Firm of Architects for Multi-Storey Flats.
Form of Agreement between the Promoters and a Firm of Architects appointed as the Result of a Competition.
Price 6*d.* per form (inclusive of purchase tax). Postage 3*d.*

Architect and His Work, The
Price 6*d.* Postage 3*d.*

Certificates, Architects', Form Prepared by the Practice Committee
Copyright. Book of 100 Certificates.
Price 17*s.* (inclusive of purchase tax). Postage 1*s.* 2*d.*

Contract, Form of Agreement and Schedule of Conditions
For use with quantities: 1939 revised 1952. Copyright.
For use without quantities: 1939 revised 1952. Copyright.
Price 2*s* 2*d.* per form (inclusive of purchase tax). Postage 3*d.*
Adapted for the use of Local Authorities, for use with quantities: 1939 revised 1952. Copyright.
Adapted for the use of Local Authorities, for use without quantities: 1939 revised 1952. Copyright.
Price 2*s.* 4½*d.* per form (inclusive of purchase tax). Postage 3*d.*
Fixed Fee Form of Prime Cost Contract for use in the repair of war-damaged property, 1946 revised 1950. Copyright.
Price 2*s.* 2*d.* (inclusive of purchase tax). Postage 3*d.*
Cost Plus Percentage Form of Prime Cost Contract for use in the repair of war-damaged property: 1946 revised 1950. Copyright.
Price 2*s.* 2*d.* (inclusive of purchase tax). Postage 3*d.*

Examination, Intermediate, Questions Set At
Price 1*s.* per examination. Postage 3*d.*

Examinations, Final and Special Final, Questions Set At
Price 1*s.* per examination. Postage 3*d.*

Forms of Articles of Pupilage
Copyright. Price 1*s.* 8*d.* (inclusive of purchase tax). Postage 3*d.*

Membership of the R.I.B.A.
Particulars of the Qualifications for Associateship.
Price 2*s.* 6*d.* Postage 3*d.*

Party Wall Notice Forms, for Use Under the London Building Act
Form A—Party Structures.
Form B—Party Fence Walls.
Form C—Intention to Build within Ten Feet and at a lower level than the bottom of the foundations of adjoining Owner's Building.
Form D—Intention to build within Twenty Feet of the adjoining Owner's Independent Building and to a depth as defined in Section 50 (1)(*d*).
Form E—Party Walls and Party Fence Walls on line of Junction of adjoining lands.
Form F—Walls or Fence Walls on Building Owner's land with footings and foundations projecting into adjoining Owner's land.
Form G—Selection of Third Surveyor.
Price 7*d.* per form (inclusive of purchase tax). Postage 3*d.*

Prizes and Studentships 1953–4
Price 2*s.* 6*d.* Postage 3*d.*

Scale of Professional Charges
Price 3*d.* Postage 3*d.*

COMPETITIONS

Church at Sighthill, Edinburgh. The Church of Scotland Home Board invites architects *resident in Scotland* to submit designs in competition for a church and ancillary buildings for a site at Sighthill, Edinburgh.

Assessors: Professor Robert H. Matthew, C.B.E. [*A*], Harry Taylor [*A*], Architect to the Church of Scotland Home Board; The Rev. Professor J. G. Riddell, D.D., Convenor of the Church of Scotland National Church Extension Committee.

Premiums: £750, £450, £300, £200, £100.
Last day for submitting designs: 30 January 1954.

Conditions may be obtained on application to the Rev. Ivan F. Tibbs, M.A., The Church of Scotland Offices, 232 St. Vincent Street, Glasgow, C.2. Deposit: £2 2*s.*

COMPETITION RESULT

Redevelopment of Marine Parade, Dover

1. Messrs. Dalgliesh and Pullen [*FF*].
   Assistants: R. H. Francis, A. A. Dipl. [*A*] G. H. Beech [*A*]
2. Mr. Frank Russell Cox [*F*].
3. Messrs. Jackson and Edmonds [*FF*].
4. Messrs. Henry Braddock [*A*] and D. F. Martin-Smith [*F*].
5. Mr. S. W. J. Smith, A.M.T.P.I. [*F*] of Messrs. Stewart and Hendry [*F*/*A*/*F*].
6. Messrs. J. Brandon-Jones and Kenneth G. Miller [*AA*].

ALLIED SOCIETIES

Changes of Officers and Addresses

Essex, Cambridge and Hertfordshire Society of Architects, Colchester and District Chapter: Chairman, F. S. Clater [*A*].

North Staffordshire Architectural Association: Secretary, J. P. Elliott, 43 Ironmarket, Newcastle, Staffs.

Architectural Institute of British Columbia: The address of the Hon. Sec., Mr. Keith B. Davison, is now 1509 West 7th Avenue, Vancouver 9, B.C.

Manitoba Association of Architects: President, Ernest J. Smith, 603 Trust and Loan Building, 173 Portage Avenue East, Winnipeg, Manitoba. The address of the Executive Secretary, Mrs. Douglas Chevrier, is now 3 Kingston Row, Winnipeg, Manitoba.

Architects' Association of New Brunswick: President, S. W. Emmerson, 94 Prince William Street West, St. John, New Brunswick.

Newfoundland Association of Architects: The address of the Hon. Secretary/Treasurer, Mr. W. J. Ryan, is now P.O. Box E5204, St. John's, Newfoundland.

Province of Quebec Association of Architects: President, John Bland [*A*], McGill University, Montreal.

GENERAL NOTES

Symposium on Heating and Ventilation of Industrial Buildings. Institution of Heating and Ventilating Engineers. The Institution of Heating and Ventilating Engineers are holding a symposium on the heating and ventilating of industrial buildings at their premises in Storey's Gate, London, S.W.1, on Wednesday 11 November. Sessions are 2.30 to 5.0 in the afternoon and 6.0 to 8.0 in the evening. Members of the R.I.B.A. are invited to attend and to take part in the discussions.

R.I.B.A. Golfing Society. A match was played against the London Solicitors' Golfing Society at Woking Golf Club on Saturday 5 September. The teams were eight a side. Foursomes were played morning and afternoon and the match resulted in a win for the architects by 5 matches to 3. It is hoped to make this fixture an annual one.

The autumn meeting was held at Denham Golf Club on Thursday 17 September. For the first time since the war, the Society were really inconvenienced with the weather and driven from the course in the afternoon by a downpour of rain. However, the morning round was completed and the Selby Cup was won by L. H. Hammond with a score of 80 — 16 = 64. The runner up was R. G. Scott with a score of 76 — 3 = 73. Both were very fine performances considering the weather conditions.

At the Annual General Meeting in the evening the Honorary Secretary, Eric H. Firmin, was elected Captain of the Society for the next Season and Joseph Emberton was elected to the Committee.

Membership Lists

ELECTION: 13 OCTOBER 1953

The following candidates for membership were elected on 13 October 1953.

AS HON. CORRESPONDING MEMBERS (2)

Brasovan: Dragisa, Belgrade, Yugoslavia.
Neidhardt: Professor Juraj. Sarajevo, Yugoslavia.

AS FELLOWS (13)

Blackbell: Edgar Watson [*A* 1937], Sunderland.
Brett: Hon. Lionel Gordon Baliol, M.A. (Oxon.) [*A* 1939], Oxford.
Carrick: James Andrew, D.A. (Glas.) [*A* 1933], Ayr.
Hamilton: John Visick, A.A.Dipl. [*A* 1928].
Inglis: Harry Charles, A.A.Dipl. [*A* 1934].
Kemp: William Charles [*A* 1930].
Lowe: William Louis [*A* 1935], Liverpool.
Lunn: Norman Sykes, B.Arch. (L'pool) [*A* 1933] Huddersfield.
Newrick: Frederick Hubert [*A* 1921], Sunderland.
Pascall: Clive, A.A.Dipl. [*A* 1941].
Smith: Peter Chandler, M.A.(Cantab.) [*A* 1934].
Sparrow: Ronald James [*A* 1944], Colchester.
Watson: Edwin [*A* 1926], Birmingham.

AS ASSOCIATES (198)

Ager: John Stanley.
Ainley: Neville Musgrove, Dip.Arch. (Manchester), Manchester.
Bagnall: Brian, B.Arch. (L'pool.), Shalford.
Barkham: John Brian, B.A.(Arch.) (Lond.), Montreal P.Q., Canada.
Barnes: Clarence Charles, Oldham.
Belchamber: Harry Croxton, East Molesey.
Bentley: Lawrence, Dip.Arch. (The Polytechnic), Goodmayes.
Bidwell: Timothy George, Kew Gardens.
Birtles: Colin John, B.Arch. (L'pool.), Liverpool.
Blake: Keith Edward, Dip.Arch. (Auck., N.Z.), Wellington, New Zealand.
Bleasby: Alan John, B.A.(Arch.) (Lond.).
Bolton: John Jefferson, Sunderland.
Bond: Bernard Stuart.
Bone: Geoffrey Thomas, Dipl.Arch. (Northern Polytechnic).
Bowie: George, D.A.(Edin.), Kirkcaldy.
Bridges: John Malcolm, Dipl.Arch. (Northern Polytechnic), West Wickham.
Briggs: George Jolyon, Leamington Spa.
Britton: George Malcolm, Bristol.
Broughton: Joseph Miles, Birkenhead.
Brown: Ronald John, Dip.Arch. (The Polytechnic), Carshalton.
Bull: Ronald Frederick, Southampton.
Burfield: John Richard, Dipl.Arch. (Northern Polytechnic), Barnet.
Caesar: (Miss) Margaret Frances, Dip.Arch. (Manchester), Farnham, Surrey.
Campin: Malcolm Edmund, Sidcup.
Carrick: (Miss) Irma Ann, Maidstone.
Carter: Charles, Battle.
Cartledge: Michael Thomas.
Chalkley: John Neville.
Chapman: Alan Arthur, Dipl.Arch. (Northern Polytechnic).
Chapman: Robert Gray, B.A.(Arch.) (Cantab.).
Cooper: (Miss) Miriam.
Copplestone: (Mrs.) Margaret Mary, Dip. Arch. (Nottm.), Nottingham.
Corbey: Eric Roy, A.A.Dipl.
Cox: James Aubrey Douglas, Dipl.Arch. (Oxford), Abingdon.
Craig: Daniel Robert, D.A.(Edin.), Londonderry.
Crowe: David Wilton, Dipl.Arch. (L'pool.).
Crump: Colin Edwin, B.Arch. (C.T.).
Darnton: Charles Parkinson, A.R.I.C.S., Billingham.
Davey: Norman Thomas, Dipl.Arch. (Oxford), Torquay.
Davies: Neville Eric, A.A.Dipl., Middleton.
Dewar: Richard Houston, D.A. (Dundee), Forfar.
Dick: Norman.
Dixon: Charles Michael, Dipl.Arch. (Leeds), Leeds.
Dodd: Alan Bruce, Dipl.Arch. (L'pool), Southport.
Dolan: Reginald Henry, Buckhurst Hill.
Dommett: Bertram Hugh, Dipl.Arch. (Northern Polytechnic).
Dowson: Philip Manning, B.A. (Cantab.).
Drawbridge: Dennis Frederick, Esher.
Dudley: James Stanley, Dipl.Arch. (Northern Polytechnic).
Duley: Frederick James.
Eve: Dennis George, Southend-on-Sea.
Fallek: Harry Charles.
Farley: Peter John, Cuckfield.
Flanders: Neal Charles, Dip.Arch. (Sheffield), Derby.
Fortlage: (Miss) Catharine Ann.
Fowler: Gordon Franklin.
Frear: Neville Bates, Dip.Arch. (Manchester), Burnley.
Furrie: Walter Charles, Dip.Arch. (Abdn.), Aberdeen.
Gabrel: Sidney, Becontree Heath.
Gardner: James Vernon, Dip.Arch. (Nottm.), Southampton.
Garrard: George Chetwode, Upminster.
Garratt: Kenneth Norman, Wolverhampton.
Gibbs: (Miss) Pamela Elizabeth, Dipl.Arch. (Northern Polytechnic), Chorleywood.
Gillespie: Bernard John, Harlow.
Golding: Philip Alan, Hornchurch.
Graham: Ronald Charles, D.A. (Glas.), Ayr.
Grant: Richard Marcus, Dipl.Arch. (Northern Polytechnic).
Hall: Ivor Graham. Ashtead.
Hammond: Roger Charles, Dip.Arch. (The Polytechnic), Bromley, Kent.
Harrison: John Stringer, B.A.(Cantab.), Norwich.
Hensman: James Mahima Kanagasooriam, Colombo, Ceylon.
Heuvel: Desmond John.
Hindson: Denis, Penrith.
Hitchon: Edward, Southport.
Hodgson: Norman Charles, Dip.Arch. (The Polytechnic), Purley.
Hogan: Brian Dominic, B.Arch. (N.U.I., Dublin).
Holmes: Richard Tilt.
Huckle: Ronald Alfred, Deal.
Hughes: Clifford Gibson, Dip.Arch. (The Polytechnic).
Hull: Malcolm Barry, B.A. (Cantab.), Cambridge.
Hurley: Leslie Arthur, Southbourne.
Hurst: Maurice.
Isted: Gordon Alfred Kember, Hove.
Jackson: Philip Randal, Dip.Arch. (Auck., N.Z.), Wellington, New Zealand.
James: (Miss) Barbara Ann, B.A. (Cantab.), Malvern.
James: Maurice Charles William.
Jamouneau: (Miss) Mary, East Horsley.
Jefcoate: Derek Roland.
Johnston: David Tucker, Carlisle.
Jones: Anthony, Dipl.Arch. (Northern Polytechnic).
Jones: Graham Derrick, Dip.Arch. (Birm.), Sutton Coldfield.
Kendall: Hugh Francis.
King: Edward Jack, Dipl.Arch. (Oxford), Oxford.
Klein: Timothy Bernard, Dipl.Arch. (Northern Polytechnic).
Lamb: John Henry Charles, Dipl.Arch. (Northern Polytechnic).
Lamb: Raymond Cyrel, Dip.Arch. (Birm.), Birmingham.
Launchbury: William Lewis, Carshalton.
Lawrence: David George, Portslade,
Lawrence: Douglas Bernard, Grantham.
Lenon: Philip John Fitzmaurice, Dipl.Arch. (Oxford).
Lewis: Eric Langford, Wrexham.
Lodge: Anthony Dodgson, Worthing.
MacGillycuddy: Michael Richard Neill, Eastham.
Maddock: Bernard Henry, A.A.Dipl., Sutton.
Mann: Gerald Arthur, Dipl.Arch. (Northern Polytechnic).
Marlow: Anthony Richard, Dipl.Arch. (Northern Polytechnic).
Marr: Victor Cran.
Marshall: Francis Reay, Cirencester.
Mason: Reginald Percy, Leicester.
Meisler: Franciszek Michal, Dip.Arch. (Manchester).
Mellish: Michael George, Dipl.Arch. (Northern Polytechnic).
Metcalfe: John Forster, Dip.Arch. (Dunelm).
Michaels: Leonard Julian.
Michie: James, D.A. (Glas.), Kinross.
Mitchell: Eric William Dey, D.A. (Glas.), Cambuslang.
Mlek: Wojciech.
Morrice: Kenneth Ian, Southsea.
Morris: Kenneth.
Mostyn: Bryan Anthony Leon, Dip.Arch. (The Polytechnic).
Newham: Philip Henry, Loughborough.
Nind: Norman Frederick, Barbourne.
Nirrenski: Zbigniew Wladys, Dipl.Arch. (Oxford), Oxford.
Oakley: (Mrs.) Doreen Mary.
Ogden: Charles Dougal, Leigh-on-Sea.
Ogden: Peter.
Ord: William Gray, B.Arch. (Dunelm.), Washington.
Ore: Arthur George Raymond, Dip.Arch. (Birm.), Stratford-on-Avon.
Owen: Geoffrey Dorsett, Fareham.
Owen: William Hughes, B.Arch. (L'pool.), Newport, Mon.
Owtram: Christopher Ronald Dennis, Liverpool.
Paddock: James Anthony, B.Arch. (L'pool.), Preston.
Paine: Michael Desmond, Dip.Arch. (The Polytechnic), St. Albans.
Pamplin: Derek John, Dip.Arch. (The Polytechnic).
Parsey: David Gerald, Southwick.
Paterson: William, D.A. (Glas.), Glasgow.

Payne: Alan John, D.F.C., Dipl.Arch. (Oxford), Wrexham.
Pearce: Duncan Alexander, A.A.Dipl., Richmond, Surrey.
Pearl: Norman Victor, Westcliff-on-Sea.
Pell: Arthur, Gatley.
Pierpoint: Brian Wareing, Wigan.
Platt: Jack, B.Arch. (L'pool), Todmorden.
Pollard: Arthur Frederick, Worthing.
Pym: Victor Francis, Charing.
Rackham: Vivian Laurel, Bury St. Edmunds.
Ramsay: William, Bishop Auckland.
Read: John Hodson.
Reading: Victor Barry, Dipl.Arch. (Northern Polytechnic).
Reed: William Gilbey, B.Arch. (L'pool.), Purley.
Rhys: Watkin Thomas John, Hove.
Richardson: Peter Alfred Theodore, Dip.Arch. (Nottm.), Derby.
Riley: Christopher, B.Arch. (L'pool.), St. Annes-on-the-Sea.
Robertson: Mark Hugh John, Stratford on Avon.
Robinson: Robert Urwin, Dipl.Arch. (Northern Polytechnic), Maidenhead.
Rogers: William Herbert Henry, Brookmans Park.
Rossiter: Basil Henry, B.Arch. (L'pool), Devizes.
Sanderson: Peter Alexander, Dipl.Arch. (Northern Polytechnic), Beckenham.
Schofield: Frederick Michael William, D.A. (Edin.), Edinburgh.
Shearman: Wilfrid, A.F.C., Dipl.Arch. (Northern Polytechnic), Ewell.
Shepherd: Clement Joseph Henry, Dipl.Arch. (Northern Polytechnic).
Shilotri: Jagannath Vithal.
Shoesmith: David Brian, B.A.(Cantab.), Bexhill-on-Sea.
Short: Arthur, Liverpool.
Simmons: Geoffrey Montague.
Small: Donald Christie, Nottingham.
Smith: Douglas Alfred Charles. Worcester Park.
Smith, John, A.A.Dipl.
Smith: Kenneth David, A.A.Dipl.
Snelling: Douglas Burrage, Elizabeth Bay, N.S.W., Australia.
Spyer: Geoffrey, A.A.Dipl.
Steczkowski: George Michael, M.A. (Cantab.), A.A.Dipl., Hoddesdon.
Stoner: Sydney John, Bromley.
Sturdy: John Francis, Lampeter.
Taylor: Basil Horace, Coulsdon.
Taylor: Peter, Dip.Arch. (Leics.), Kettering.
Thomas: Browell Barnes, Dip.Arch. (Nottm.), Nottingham.
Thomas: Desmond, B.A. (Arch.) (Manchester), Rhondda.
Thomas: Harold Keith, Merthyr Tydfil.
Tippins: Louis Osman, Birmingham.
Treadwell: Geoffrey.
Trenbath: William Ronald, Hale.
Turner: Alan Colin, Dip.Arch. (The Polytechnic), Northfleet.
Voelcker: John Harold Westgarth, A.A.Dipl.
Wakeham: Leslie Anniss, Plymouth.
Walker: Walter Sydney, Shrewsbury.
Walker: William Dawson, Dipl.Arch. (Leeds), Bradford.
Walmsley: Alan, Bolton.
Warren: John Charles Crisfield.
Webber: Gerald Alfred, Dipl.Arch. (Northern Polytechnic).
White: Henry Kenneth, Dipl.Arch. (Leeds), Scottsdale, Arizona, U.S.A.
Whiteley: David Gordon, A.A.Dipl., Mitcham.
Wiesman: Brahm, M.Arch. (McGill), Edmonton, Alberta, Canada.
Wilson: Andrew, Manchester.
Wilson: Frederick Anthony Charles, Dip.Arch. (The Polytechnic).
Wood: Humphrey Paul, B.A.(Cantab.), Wareham.
Wornum: Michael, B.A.(Arch.) (Cal.), Bosham.
Wragg: (Miss) Joyce Valerie, Dip.Arch. (The Polytechnic), Taplow.
Wright: Peter Barry, Southsea.
Yeates: John Frank, Tunbridge Wells.

ELECTION: 8 DECEMBER 1953

An election of candidates for membership will take place on 8 December 1953. The names and addresses of the candidates with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday 9 November 1953.

The names following the applicant's address are those of his proposers.

AS HON. CORRESPONDING MEMBER (1)

Artucio: Professor Leopoldo Carlos. Pilcomayo 5060, Montevideo, Uruguay, S. America. Proposed by the Council.

AS FELLOWS (14)

Bath: Charles George, A.M.T.P.I. [*A* 1935], 796 High Road, Tottenham, N.17; 28 Brook Road, Loughton, Essex. T. E. Scott, H. Lidbetter, D. H. Beaty-Pownall.

Compton: (Mrs.) Audrey Mary, A.A.Dipl. [*A* 1935], Easter Cottage, Aldwick, Bognor Regis, West Sussex. Samuel Beverley, Gordon Tait, P. J. B. Harland.

Edwards: Percy William, A.M.T.P.I. [*A* 1937], Messrs. Edwards and Webster, 10 St. Mary Street, Chippenham, Wilts.; Windrush, The Butts, Chippenham. T. W. Snailum, E. W. Lewis, R. J. Potter.

Ellis: Jack [*A* 1922], 4 Temple Row West, Birmingham; 95 Silhill Hall Road, Solihull, Warwickshire. F. H. Shann, J. B. Surman, J. H. Jones.

Fedeski: Henry, A.M.T.P.I. (R.I.B.A. Diploma in Town Planning) [*A* 1934], 28 Parade, Leamington Spa, Warwickshire; 102 Emscote Road, Warwick. C. H. Elkins, J. B. Surman, G. R. Barnsley.

Howe: Jack [*A* 1935], 12 Spring Street, W.2; 65 St. George's Square, S.W.1. E. M. Fry, F. R. S. Yorke, Sir Hugh Casson.

Jack: William Archibald Park [*A* 1949], 92 Bath Street, Glasgow, C.2; Argyll Square, Oban; Parkly, Clarendon Place, Stirling. William McCrea, A. G. Henderson, Basil Spence.

Kerr: Frederick Henri [*A* 1946], 3 Malew Street, Castletown, Isle of Man; Littlethorpe, Arbory Road, Castletown. H. A. Thomas, G. A. Crockett, T. E. Scott.

Knight: Thomas William [*A* 1935], 99 St. Aldates, Oxford. H. F. Hurcombe, H. F. Trew, H. S. Davis.

Lawson: Richard Donald, Dip.Arch. (Manchester), A.M.T.P.I. (R.I.B.A. Diploma in Town Planning) [*A* 1936], Regional Offices, Ministry of Housing and Local Government, Reading; 33 Wilderness Road, Earley, Berks. John Greaves, F. R. Cox, T. L. J. Chamberlain.

Young: Robert Robertson Reid, B.Arch. (L'pool), Dip.C.D. (L'pool) [*A* 1937], 6 Bluecoat Chambers, Liverpool, 1; 'Blairlea,' Acrefield Road, Woolton, Liverpool. Prof. L. B. Budden, Prof. R. Gardner-Medwin, Prof. Gordon Stephenson.

And the following Licentiates who have passed the qualifying examination:—

Bellis: Gwilym, Denbighshire County Architect's Dept., Grove Park, Wrexham; 19 Acton Gardens, Wrexham. H. A. Clark, F. L. Halliday, W. C. Young.

Jacobson: Zalik, 48 Manchester Street, W.1. Kenneth Peacock, Louis de Soissons, D. M. Hodges.

Moore: Edwyn Walter, 'Plantation House,' 31 Fenchurch Street, E.C.3; 'The White Cottage,' Walton-on-Thames, Surrey. Sir Charles Mole, Prof. Sir Patrick Abercrombie, Prof. Sir William Holford.

AS ASSOCIATES (118)

The name of a school, or schools after a candidate's name indicates the passing of a recognised course.

Ablewhite: John Gardner (Arch. Assoc. (London): Sch. of Arch.), 10 Stuart Avenue, Ealing Common, W.5. C. W. Hutton, W. S. Newman, A. R. F. Anderson.

Andrews: Arthur Gordon (Arch. Assoc. (London): Sch. of Arch.), 'Culmstock,' Send Lane, nr. Ripley, Surrey. E. G. Bax, N. D. Quick, E. E. Rosenberg.

Atkinson: Robert Ingham [Final], 2 St. Hilda's Terrace, Thornbury, Bradford, 3. J. R. Tolson, E. E. Morgan, Eric Morley.

Bartlett: Patrick Arthur [Special Final], 1 Beaufort Gardens, Hendon, N.W.4. J. S. Walkden, W. Mollison, A. T. Edwards.

Beveridge: James, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 74 Baird Drive, Murrayfield, Edinburgh, 12. Basil Spence, W. I. Thomson, W. H. Kininmonth.

Blyth: John Allan, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 77 Sighthill Loan, Edinburgh, 11. A. A. Foote, W. I. Thomson, L. G. MacDougall.

Bourke: Sylvester William, B.Arch.(N.U.I. Dublin) (Univ. Coll. Dublin, Ireland: Sch. of Arch.), 15 High Street, Kilkenny, Eire. J. V. Downes, Vincent Kelly, Raymond McGrath.

Brady: Lawrence Henry [Special Final], 74 Queens Road, Wimbledon, S.W.19. J. S. Thomson, D. S. Taylor, P. G. Fairhurst.

Brown: David, D.A. (Dundee) (Dundee Coll. of Art: Sch. of Arch.), 12 Hill Street, Cupar, Fife. John Needham, T. H. Thoms, A. D. Haxton.

Burkett: John (Arch.Assoc. (London): Sch. of Arch.), End House, Yester Park, Chislehurst, Kent. R. F. Jordan, A. R. F. Anderson, T. B. Daniel.

Butcher: (Mrs.) June Margaret (Arch.Assoc. (London): Sch. of Arch.), 27 Featherdell, Hatfield, Herts. Henry Elder, Richard Nickson, Denis Poulton.

Coles: Robert John (Arch.Assoc. (London): Sch. of Arch.), 151 Churchill Avenue, Foleshill, Coventry, Warwickshire. A. R. F. Anderson, J. M. Easton, A. W. Kenyon.

Covington: John Stenton (Arch.Assoc. (London): Sch. of Arch.), Genista, Roman Landing, West Wittering, Chichester, Sussex. Henry Elder, Harry Sherwood, F. R. Steele.

Crease: David Plaistow, B.A.(Cantab.), D.A. (Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 246 Eden Way, Beckenham, Kent. W. P. Dyson, W. I. Thomson, B. A. Hebeler.

de Beaumont: Robert Henri Louis-Charles, B.A.Arch.(Cantab.) (Arch. Assoc. (London): Sch. of Arch.), 5 Ensor Mews, Cranley Gardens, S.W.7. Denis Clarke Hall, W. P. Dyson, Peter Bicknell.

Devine: Edward Allison [Special Final], 6 Hilltop Crescent, Bapaume, Catterick Camp, Yorks. Applying for nomination by the Council under Bye-law 3(*d*).

Dorward: Ivor Gardiner Menzies Gordon, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 'Burnbrae,' Currie, Midlothian. T. W. Marwick, J. R. McKay, W. I. Thomson.

Dowling: Robert Bryan [Final], 11 Eliot Vale, Blackheath, S.E.3. Edwin Rice, Gerald Lacoste, D. R. Humphrys.

Dunn: David Vaughan George, Dip.Arch (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 73 Mayfield Road, Derker, Oldham, Lancs. Prof. R. A. Cordingley, Harold Bowman, G. B. Howcroft.

Edwards: Dennis Gordon [Final], 3 Ashworth Crescent, Mapperley, Nottingham. E. W. Roberts, E. Frear, W. G. Thoms.

Eisner: Hans Gunter, B.A. (Arch.) (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 730 Stockport Road, Longsight, Manchester, 13. Prof. R. A. Cordingley, P. G. Fairhurst, B. L. Moir.

Evans: Michael Houching (Arch.Assoc. (London): Sch. of Arch.), 1 Dale Road, Leigh-on-Sea, Essex. H. Conolly, Denis Senior, Roff Marsh.

Farthing: Leslie William [Final], 86 Alderbrook Road, Balham, S.W.12. Norman Keep, A. H. Ley, H. Colbeck.

Fleming: John [Special Final], Islandbawn, Muckamore, Co. Antrim, N. Ireland. Val. Smyth, Benjamin Cowser, T. R. Eagar.

Fletcher: John Willoughby (Arch. Assoc. (London): Sch. of Arch.), 26 Schubert Road, Putney, S.W.15. Henry Elder, George Fairweather, Anthony Tripe.

Ford: William Arthur [Special Final], 1 Rosemont Road, Richmond, Surrey. A. B. Waters, A. L. Smith, A. E. Lees.

Franklyn: Donald Henry [Special Final], 7 Small Holding, Eastwoodbury Lane, Southend-on-Sea, Essex. J. M. Scott, A. S. Belcham, P. R. Fincher.

Funnell: John Martin, Dipl.Arch. (Northern Polytechnic) (Northern Poly. (London): Dept. of Arch.), 21 Florence Road, Sanderstead, Surrey. T. E. Scott, C. G. Stillman, G. L. D. Hall.

Garde: Robert Christopher Roger [Special Final], Emmett House, Emmett Place, Cork. D. A. Levie, Vincent Kelly, J. J. Robinson.

Gossling: (Miss) Margaret Hilary, B.Sc.(Arch.) (Glas.) (Glasgow Sch. of Arch.), 30 Broompark Drive, Glasgow, E.1. Prof. A. E. Richardson, Prof. W. J. Smith, Marshall Sisson.

Gower: Peter James Antony, Dip.Arch. (Birm.) (Birmingham Sch. of Arch.), Weston-under-Lizard, Shifnal, Shropshire. A. Douglas Jones, C. E. M. Fillmore, T. M. Ashford.

Gowers: Colin Anthony Barrett [Special Final], 35 Connaught Mansions, Prince of Wales Drive, S.W.11. A. R. Borrett, Frank Hoar, Dr. J. L. Martin.

Graham: Alan Murray (Arch. Assoc. (London): Sch. of Arch.), 9 Chepstow Villas, W.11. R. F. Jordan, A. R. F. Anderson, E. Forster.

Graham: John Anthony, B.A.(Arch.) (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 56 The Stow, Mark Hall, Harlow New Town, Essex. Prof. R. A. Cordingley, J. P. Nunn, Frederick Gibberd.

Gray: George Beaumont, D.A. (Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 4 Sutherland Avenue, Stirling, Scotland. J. R. McKay, W. I. Thomson, Dr. J. L. Martin.

Gray: William [Special Final], 5 Dowan Place, Stirling. T. S. Sutherland, E. S. Bell, A. M. McMichael.

Green: Ronald Arthur, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 28 Palace Court, W.2. R. F. Jordan, B. W. Turnbull, Henry Elder.

Grogan: (Mrs.) Helen, Dip.Arch. (The Polytechnic) (The Poly. Regent Street, London: Sch. of Arch.), 4A, Beaufort Gardens, S.W.3. J. S. Walkden, Dr. J. L. Martin, Joseph Berger.

Harrison: David Ronald (Arch.Assoc. (London): Sch. of Arch.), 11 Midmoor Road, S.W.19. Paul Nightingale, Henry Elder, D. Nightingale.

Harrison: Michael John Edward [Final], 41 Fallowfield Road, Solihull, Birmingham. H. W. Weedon, H. C. Bloomer, A. L. Hall.

Hay: Charles Dewar [Special Final], 148 St. Clair Street, Kirkcaldy, Fife, Scotland. J. A. R. McKee, W. H. Kininmonth, T. W. Marwick.

Henry: John Vanstone [Special Final], 254 Friern Road, S.E.22. G. A. Crockett, A. H. Ley, L. C. Varcoe.

Herd: Robert Dallas [Special Final], c/o Messrs. Sinclair MacDonald & Son, Princes Street, Thurso, Caithness, Scotland. Applying for nomination by the Council under Bye-law 3(*d*).

Heywood: Michael, Dip.Arch. (Leics.) (Leicester Coll. of Art and Tech. Sch. of Arch.), 54 Oxford Road, Harrow, Middlesex. F. Chippindale and applying for nomination by the Council under Bye-law 3(*d*).

Holden: Robert Patrick Evelyn (Arch. Assoc. (London): Sch. of Arch.), 'Broadshade,' 39 Palmers Avenue, Grays, Essex. Frank Risdon, James Melvin, H. M. Luyken.

Hudson: Albert Cornelius Charles [Special Final], 291A Tooley Street, S.E.1. Dr. J. L. Martin, Edwin Williams, W. J. Durnford.

Hyslop: William [Special Final], Council Offices, Towngate, Leyland, Lancs. Hubert Bennett, U. A. Coates, E. Firth.

Jack: Thomas Kenneth, B.A.(Cantab.) (Arch. Assoc. (London): Sch. of Arch.), 40 Cholmeley Crescent, Highgate, N.6. Peter Bicknell, H. C. Hughes, Gordon Tait.

Jackson: Victor, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 4 Burton Closes, Haddon Road, Bakewell, Derbyshire. Prof. L. B. Budden, Prof. Stephen Welsh, H. B. S. Gibbs.

Jenkins: Frederick James, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 40 Queen Street, Stirling, Scotland. E. S. Bell, A. G. Jury, A. M. McMichael.

Johnston: Marcus MacDonald, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 38 Rose Street, Dunfermline, Fife. James Shearer, J. R. McKay, T. W. Marwick.

Jones: Gwilym Richard, Dip.Arch. (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 'Bronallt,' Nevin, Caernarvonshire, N. Wales. Prof. R. A. Cordingley, J. P. Nunn, C. A. Bollinger.

Keatley: Robert Aubrey [Special Final], 24 Hillside Gardens, Wallington, Surrey. Applying for nomination by the Council under Bye-law 3(*d*).

King: Reginald Percy Richard [Special Final], 53 Riviera Drive, Southend-on-Sea, Essex. G. S. Harrison, Edwin Rice, Miss J. G. Ledeboer.

Kirkwood: Martin Fraser, Dip.Arch. (Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 3 Broallan, Kilmorack, Beauly, Inverness-shire. E. F. Davies, Lieut.-Col. Alexander Cullen, R. C. Ballantyne.

Laird: (Miss) Elizabeth Anne, D.A. (Dundee) (Dundee Coll. of Art: Sch. of Arch.), 36 Albany Terrace, Dundee. William Salmond, John Needham, T. H. Thoms.

Landau: Royston Simeon (Arch. Assoc. (London) Sch. of Arch.), 21 Elgin Avenue, W.9. Sir Hugh Casson, W. S. Newman, A. R. F. Anderson.

Landles: Andrew, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 11 Boswall Grove Edinburgh, 5. J. Holt, T. W. Marwick, W. H. Kininmonth.

Latham: James Edwin, B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 37 Dunbabin Road, Liverpool, 15. Prof. L. B. Budden, Prof. R. Gardner-Medwin, F. X. Velarde.

Lawrie: John Mackay, Dip.Arch. (Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), County Architect's Dept., Ross & Cromarty County Council, Old Academy, Dingwall. E. F. Davies. Lieut.-Col. Alexander Cullen, J. G. Marr.

Leiper: Robert, Dip.Arch. (Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.), 71 Springbank Terrace, Aberdeen. E. F. Davies, A. G. R. Mackenzie, G. A. Mitchell.

Liley: Peter Horbury, B.A.(Arch.) (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), 29, Sunnyside Grove, Ashton-under-Lyne, Lancs. Prof. R. A. Cordingley, J. P. Nunn, G. B. Howcroft.

Lowrie: (Miss) Joyce Mary (Arch. Assoc. (London): Sch. of Arch.), 82 Parkway, Welwyn Garden City, Herts. T. E. Scott, P. V. Mauger, George Fairweather.

McCormick: James Morrow, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.) 10 Wheatfield Drive, Lurgan, Co. Armagh, N. Ireland. J. R. McKay, T. W. Marwick, W. H. Kininmonth.

MacEwan: Donald, Dip.Arch. (Leics.) (Leicester Coll. of Art and Tech.: Sch. of Arch.), 37 Stamford Road, Oakham, Rutland. F. Chippindale, E. E. Rosenberg, F. R. S. Yorke.

Macfadyen: Neil (Arch.Assoc. (London): Sch. of Arch.), Meopham Bank, Tonbridge, Kent. Henry Elder, C. L. Gill, A. R. F. Anderson.

Macfarlane: Stephen Grant Parlan (Arch. Assoc. (London): Sch. of Arch.), Bryn Bowlio, Llanferres, Mold, Flintshire. R. F. Jordan, George Fairweather, Alec Gibson.

Mackenzie: Samuel [Final], 39 Rosefield Road, Troqueer, Dumfries. J. C. Miller, Prof. W. J. Smith, William McCrea.

MacLaughlin: (Miss) Anne Felicia, B.Arch. (N.U.I. Dublin) (Univ. Coll., Dublin, Ireland: Sch. of Arch.), Aghanloo, Kill Lane, Foxrock, Co. Dublin. J. V. Downes, J. J. Robinson, Vincent Kelly.

MacManus: Owen Patrick [Special Final], 40 Wilson Road, Mount Merrion, Co. Dublin. J. O'H. Hughes, Vincent Kelly, J. V. Downes.

Maguire: Robert Alfred (Arch. Assoc. (London): Sch. of Arch.), 29 Rosary Gardens, S.W.7. Laurence King, A. R. F. Anderson, R. E. Enthoven.

Mason: Richard Anthony [Final], 143 Victoria Park, Tunstall, Stoke-on-Trent. E. T. Watkin, Clifton Edwards, J. A. Pickavance.

Matheson: Allen Short, D.A. (Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 7A West Castle Road, Edinburgh, 10. L. G. MacDougall, T. W. Marwick, J. R. McKay.

Matthews: Peter, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 12 Madeira Grove, Woodford Green, Essex. Arthur Korn, R. Vaughan, H. G. Goddard.

Mawson: Charles Leslie [Final], 93 Cross Lane, Birkenshaw, Nr. Bradford, Yorks. Hubert Bennett, A. W. Glover, H. S. Silcock.

Mendenhall: Reginald Alfred [Final], 111 Belgrave Road, Slough, Bucks. Edgar Bunce, Duncan Wylson, H. J. Stribling.

Miller: Alexander Moncur (Arch. Assoc. (London): Sch. of Arch.), 55 Old Park Ridings, Grange Park, N.21. Henry Elder, George Fairweather, Prof. Basil Ward.

Mochrie: Allan John, B.Sc.(Arch.) (Glas.) (Glasgow Sch. of Arch.), 362 Kingsacre Road, Rutherglen, Glasgow. Prof. W. J. Smith, William McCrea, N. R. J. Johnston.

Naismith: Robert Wood, B.Sc.(Glas.) (Glasgow Sch. of Arch.), Hawthorn Villa, Cockenzie, E. Lothian, Scotland. E. Riss, Donald Jack, T. J. Beveridge.

Nelson: Richard [Special Final], 35 Dronfield Street, Leicester. Hubert Bennett, Alec Nisbet, G. A. Crockett.

Nicholas: Victor Albert [Special Final], 1 Butterworth Cottages, Station Road East, Oxted, Surrey. E. D. J. Mathews, O. D. Pearce, A. G. Nisbet.

Nixon: Peter Edward, Dip.Arch. (Manchester) (Victoria Univ., Manchester: Sch. of Arch.), Wanstead, 23 Lancaster Road, Newcastle, Staffs. Prof. R. A. Cordingley, A. C. H. Stillman, J. R. Piggot.

Oakley: David John (Arch. Assoc. (London): Sch. of Arch.), 134 Tanner Street, S.E.1. Norman Keep, Henry Elder, R. F. Jordan.

Pickard: Malcolm Stevens [Final], 9 Kelvin Street, Holderness Road, Hull, E. Yorks. J. Konrad, Edgar Farrar, Allanson Hick.

Poole: Kennard Melville, B.Arch. (C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.), c/o J. B. F. Cowper, Esq., 39 Gordon Square, W.C.1. Denis Harper, Denys Lasdun, J. B. F. Cowper.

Poole: Michael Verity [Final], 113 Abbey Road, Westbury-on-Trym, Bristol. G. D. G. Hake, J. R. Edwards, T. H. B. Burrough.

Powell: Clifford (Passed a qualifying Exam. approved by the I.S.A.A.), 13 Lancaster Avenue, Liverpool. Prof. L. W. T. White, Sir Alfred Shennan, F. X. Velarde.

Powell: Richard Malcolm (Arch. Assoc. (London): Sch. of Arch.), 81 Cornwall Gardens, S.W.7. Henry Elder, W. W. Todd, H. L. Kelly.

Raimes: Alan Sleight [Special Final], 1A Cranley Gardens, South Kensington, S.W.7. L. M. Gotch, M. L. Winslade, C. E. Culpin.

Redpath: William John Coventry, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), Chapel Acre, Dundas Castle, South Queensferry, West Lothian, Scotland. W. H. Kininmonth and applying for nomination by the Council Bye-law 3(*d*).

Rogers: Howard Cleveland [Special Final], 23 Ketton Avenue, Sheffield, 8. Hugh Smith, J. A. Dempster, Robert Cawkwell.

Sampson: George Henry [Final], 14 Coronation Flats, Jenkins Dale, Chatham, Kent. Frank Risdon, B. W. Fitch-Jones, R. L. Honey.

Scott: Kenneth, B.A. (Sheffield) (Univ. of Sheffield: Dept. of Arch.), 7 Buckingham Avenue, Crosby, Scunthorpe. Prof. Stephen Welsh, H. B. S. Gibbs, H. B. Leighton.

Sewell: Clare Arnold, Dip.Arch. (The Polytechnic) (The Poly. Regent Street, London: Sch. of Arch.), 425A, Chertsey Road, Whitton, Middlesex. J. S. Walkden, A. R. Shibley, W. W. Fisk.

Shailer: Phillip Francis [Special Final], 38 Wilmington Avenue, Chiswick, W.4. P. G. Freeman, H. E. Foreman, Denis Poulton.

Sheehan: Edward, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 7 Piershill Terrace, Edinburgh. W. H. Kininmonth, Sir Charles Mole, T. W. Marwick.

Simpson: Harold, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 75 Viewforth, Edinburgh, 10. T. W. Marwick, J. R. McKay, J. Holt.

Smith: Lloyd Allan, A.A.Dipl. (Arch. Assoc. (London): Sch. of Arch.), 16 Cliveden Place, S.W.1. Henry Elder, J. M. Scott, Neil Martin-Kaye.

Smith: Matthew Fyfe [Final], 14 Thane Road, Glasgow, W.3. Prof. W. J. Smith and applying for nomination by the Council under Bye-law 3(*d*).

Smith: Stanley Alfred [Final], 8 Mountbell Road, Stanmore, Middlesex. A. W. Hall, Alister MacDonald, C. Scriven.

Staughton: Ronald Albert [Final], 25A Highgate West Hill, N.6. J. S. Walkden, T. H. Eley, J. R. Hill.

Tasker: Douglas Maughan [Final], 25 New Bridge Street, Newcastle upon Tyne, 1, Northumberland. Prof. W. B. Edwards, R. N. Mackellar, F. A. Child.

Thulborn: Albert Richard [Special Final], 60 Wood Lodge Lane, West Wickham, Kent. Victor Wilkins, E. H. Banks, G. B. Colbourn.

Tucker: David William [Final], 156 Leicester Road, Loughborough, Leics. F. H. Crossley, E. H. Ashburner, E. W. Pedley.

Tunbridge: Colin (Arch.Assoc. (London): Sch. of Arch.), 27 Church Road, Byfleet, Surrey. Dr. J. L. Martin, H. F. Hoar, J. Berger.

Vaughan: John, B.Arch. (L'pool), M.C.D. (Liverpool Sch. of Arch. Univ. of Liverpool), 33 Greenbank Road, Sefton Park, Liverpool, 18. Prof. L. B. Budden, Prof. R. Gardner-Medwin, Prof. Gordon Stephenson.

Waldock: Brian David (Arch.Assoc. (London): Sch. of Arch.), 6 Sutton Court Mansions, Grove Park Terrace, Chiswick, W.4. H. G. Goddard, Arthur Korn, N. F. Woodroffe.

Walker: Norman Charles, B.A.(Cantab.), D.A. (Edin.) (Edinburgh Coll. of Art: Sch. of Arch.), 4 Oxford Terrace, Edinburgh, 4. W. H. Kininmonth, W. P. Dyson, Peter Bicknell.

Waskett: Arthur Henry John [Special Final]. 'The Spinney,' Jenkins Hill, Bagshot, Surrey, Julian Leathart, H. S. Gardiner, C. S. Kimpton.

Watts: Fraser Herbert (Arch.Assoc. (London): Sch. of Arch.), 39 Redcliffe Road, S.W.10. Arthur Korn, H. G. Goddard, A. R. F. Anderson.

Weatherill: Leonard Walter [Special Final], 2 Romford Road, Stratford, E.15. F. J. Lander, R. G. Covell and applying for nomination by the Council under Bye-law 3(*d*).

White: Leonard George [Final], 38 Howson Road, S.E.4. Applying for nomination by the Council under Bye-law 3(*d*).

Whiteley: Peter Bryan (Arch.Assoc. (London): Sch. of Arch.), 29 Rosary Gardens, S.W.7. R. F. Jordan, Arthur Korn, Henry Elder.

Wild: John Kenneth [Final], Drubbery Lane, Longton, Stoke-on-Trent. E. T. Watkin, W. B. Oldacre, Clifton Edwards.

Wilson: Ronald John Aitken [Special Final], Woodvale, Kilbride Road, Dunoon, Argyll. Lieut.-Col. Alexander Cullen, J. A. Ross, Jack Blackburn.

Winter: John Anthony (Arch.Assoc. (London): Sch. of Arch.), 431 Unthank Road, Norwich. Arthur Korn, A. R. F. Anderson, Denys Lasdun.

Woodgate: Cyril, Dip.Arch. (Cardiff) (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), c/o 331 Southmead Road, Southmead, Bristol. Lewis John, Dr. T. A. Lloyd, C. F. Jones.

Wynne: Joseph Frank, D.A. (Dundee) (Dundee Coll. of Art: Sch. of Arch.), c/o 8 Tannadice Street, Dundee. John Needham, T. H. Thoms, A. D. Haxton.

AS LICENTIATES (7)

Christie: Andrew George, c/o The Borough Architect, Town Hall, Gateshead; 13 Cleadon Hill Drive, South Shields. J. Holt, D. L. Couves, T. A. Page.

Clague: John Charlesworth, Lloyds Bank Chambers, 144/6 High Street, Herne Bay, Kent; 119 Beltinge Road, Herne Bay. H. Anderson and the President and Hon. Secretary of the S.E.S.A. under Bye-law 3(*a*).

Jackson: Charles Edward, 73 Harrington Avenue, Blackpool. Applying for nomination by the Council under Bye-law 3(*d*).

Jones: Leslie Arthur, Town Hall, Hendon, N.W.4; 248 Edgwarebury Lane, Edgware, Middlesex. F. T. Winter, H. W. Moore, S. Stern.

Simpson: Arthur, Messrs. Chippindale and Edmondson, Dale Chambers, Bradford; 14, New Adel Lane, Leeds, 6. Benjamin Chippindale, N. R. Paxton, N. H. Fowler.

Walker: Charles Herbert, Ministry of Works, Abell House, John Islip Street, S.W.1; 26, Court House Gardens, Finchley, N.3. P. M. Andrews, R. T. Boutall, Oscar Singer.

Woolams: Percy Albert, Ministry of Works, Cleland House, Page Street, Westminster, S.W.1; The Old Manor House, Ockham Road South, East Horsley, Leatherhead, Surrey. T. R. Eltringham, W. F. Granger, A. C. Hopkinson.

ELECTION: 2 FEBRUARY 1954

An election of candidates for membership will take place on 2 February 1954. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday 23 January 1954.

The names following the applicant's address are those of his proposers.

AS FELLOWS (2)

King: Jack Ian [*A* 1928], 20 Brandon Street, Wellington, New Zealand; 7 Lucknow Terrace, Khandallah, Wellington. W. G. Young, M. K. Draffin, H. L. Massey.

Richardson: John Athol [*A* 1938], Assistant Director, P.W.D., Salisbury, S. Rhodesia; Argyle Road, Avondale, Salisbury. W. D'A. Cathcart, F. A. Jaffray, J. M. Easton.

AS ASSOCIATES (24)

Balmforth: John Herbert (Passed a qualifying Exam. approved by the R.A.I.A.), 16 Constitution Road, Dulwich Hill, Sydney, N.S.W., Australia. Prof. B. B. Lewis, S. T. Parkes, Mrs. Hilary Lewis.

Baverstock: John Charles, B.Arch. (Toronto) (Univ. of Toronto, Canada: Sch. of Arch.), 18 Harvie Avenue, Toronto, Ontario, Canada. Prof. E. R. Arthur, B. R. Coon, H. L. Allward.

Box: John Godwin (Passed a qualifying Exam. approved by the N.Z.I.A.), Flat 1, 'Gowrie,' 3 Plunket Street, Kirribilli, Sydney, N.S.W., Australia. Prof. A. C. Light, Prof. C. R. Knight, W. R. Richardson.

Brown: Rodger James Robert (Passed a qualifying Exam. approved by the N.Z.I.A.), Assistant Architect, Waikato Hospital Board, P.O. Box 14, Hamilton, New Zealand. Prof. A. C. Light, Prof. C. R. Knight and the President and Hon. Secretary of the N.Z.I.A. under Bye-law 3(*a*).

Burton: John Miller, B.Arch. (Manitoba) (Univ. of Manitoba, Winnipeg, Canada: Dept. of Arch.), 2024 Pasqua Street, Regina, Saskatchewan, Canada. A. J. Hazelgrove, E. E. Temple, R. S. Morris.

Coleman: Nyall Powell (Passed a qualifying Exam. approved by the N.Z.I.A.), c/o Messrs. Alva M. Bartley & H. D. S. McGowan, Power Board Building, Queen Street, Auckland, New Zealand. H. L. Massey, Prof. A. C. Light, Prof. C. R. Knight.

Dorner: Ignaz (Passed a qualifying Exam. approved by the I.S.A.A.), P.O. Box 9678, Johannesburg, S. Africa. Applying for nomination by the Council under Bye-law 3(*d*).

Dowsett: James Gordon, A.S.T.C. (Arch.) (Passed a qualifying Exam. approved by the R.A.I.A.), 97 Meyer Road, Singapore. Prof. F. E. Towndrow, H. L. Bloomfield, W. I. Watson.

Garth: William Alfred [*L*] (Passed a qualifying Exam. approved by the N.Z.I.A.), Ministry of Works, Hydro Design Office, Sydney Street, Wellington, New Zealand. W. Mollison, W. J. Reed, H. M. Luyken.

Hamann: George Frederick, B.Arch. (Toronto) (Univ. of Toronto, Canada: Sch. of Arch.), 45 The Oaks, Bain Avenue, Toronto, Ontario, Canada. R. S. Morris, J. B. Parkin, Prof. E. R. Arthur.

Ho: Kok Kit, A.S.T.C. (Arch.) (Passed a qualifying Exam. approved by the R.A.I.A.), 591 Pacific Highway, Chatswood, N.S.W., Australia. Prof. F. E. Towndrow, W. R. Laurie, Prof. Denis Winston.

Ivens: Roger John [Special Final], c/o Messrs. W. Whitaker (Construction) Ltd., 11 Wilberforce Street, Freetown, Sierra Leone, British West Africa. R. H. Macartney, T. E. Scott and applying for nomination by the Council under Bye-law 3(*d*).

Kerr: George Howard, D.A. (Glas.) (Glasgow Sch. of Arch.), 414 Ninth Street, Saskatoon, Saskatchewan, Canada. Prof. W. J. Smith, A. G. Henderson, Alexander Wright.

McConnell: Raymond, Dip.Arch. (Dunelm) (Kings Coll. (Univ. of Durham), Newcastle upon Tyne: Sch. of Arch.), Consulting Architect, Communications and Building Dept., Government of East Bengal, Dacca, East Bengal. Prof. W. B. Edwards, C. A. Harding, J. H. Napper.

Maccormick: James Clayton, B.Arch. (Melbourne) (Passed a qualifying Exam. approved by the R.A.I.A.), 33 Marshall Avenue, Kew, E.4, Melbourne, Australia. Prof. B. B. Lewis, Mrs. Hilary Lewis, Harry Winbush.

Macdonald, Bruce, B.Arch. (Rand) (Passed a qualifying Exam. approved by the I.S.A.A.), 28 Roslin House, Salisbury, S. Rhodesia. R. C. Rinaldi and applying for nomination by the Council under Bye-law 3(*d*).

Manning: Edwin Warren, B.Arch. (Toronto) (Univ. of Toronto, Canada: Sch. of Arch.), 41 McKenzie Avenue, Toronto, Canada. Prof. E. R. Arthur, B. R. Coon, H. L. Allward.

Narayan: Udit, Dip.Arch. (Auck. N.Z.) (Passed a qualifying Exam. approved by the N.Z.I.A.), c/o P.O. Box 1, Suva, Fiji. Prof. A. C. Light, H. L. Massey, Prof. C. R. Knight.

Pithavadian: Fenn Bennett, B.A., B.E. (Madras), B.Arch. (McGill) (McGill Univ., Montreal, Canada: Sch. of Arch.), c/o Messrs. Prynne, Abbott & Davies, 13 College Road, Madras, 6, India. M. G. Desai, L. M. Chitale, G. B. Mhatre.

Roytowski: Bernard Daniel, B.Arch. (C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.). 405 Dumbarton House, Cape Town, S. Africa. Prof. L. W. T. White, O. Pryce Lewis and applying for nomination by the Council under Bye-law 3(*d*).

Twopeny: John Richard Newell, B.E. (Arch.) (Adelaide) (Passed a qualifying Exam. approved by the R.A.I.A.), Kingsland Road, Aldgate, South Australia. D. W. Berry, W. J. M. Sedgley, F. K. Milne.

Weaver: Roderick Norman, B.Arch. (Rand) (Passed a qualifying Exam. approved by the I.S.A.A.), 4 Devon House, Aiken Street, Port Shepstone, Natal, S. Africa. D. M. Sinclair, J. A. Hoogterp and applying for nomination by the Council under Bye-law 3(*d*).

Wijesingha: Prema Norbert (Passed a qualifying Exam. approved by the R.A.I.A.), 8 Somagiri Place, Wellawatta, Colombo, 6, Ceylon. H. S. Winbush, R. G. Parker, Prof. B. B. Lewis.

Yeap: Geok-Kee, B.Arch. (Sydney) (Passed a qualifying Exam. approved by the R.A.I.A.), 27 Kelawei Road, Penang, Malaya. Prof. H. I. Ashworth, E. L. Thompson, Cobden Parkes.

Obituaries

Reginald Butler [*L*] died on 28 March, aged 69.

Mr. Butler was from 1909 until his retirement in 1950 on the staff of Dr. Barnardo's Homes; from 1920 onwards in the capacity of Chief Architect and Surveyor. He was as such responsible for the design and erection of a number of new homes and schools.

Noel Lees Reece [*F*] died on 6 July, aged only 43.

Mr. Reece studied at Victoria University, Manchester, School of Architecture, and was an articled pupil, subsequently an architectural assistant, in private practice until 1934. He then held appointments with various local authorities, finally acting as Chief Architect to the Royal Borough of Kensington from 1947 to 1953.

Mr. Reece was a contributor to the technical press and the author of two books, *Building Geometry* and *Surveying and Levelling for Builders*, both published by George Newnes. He was a former lecturer in those subjects at the Thanet Technical Institute, and examined in them for the Union of Educational Institutions since 1944.

Ewen Sydney Barr [*F*] died on 29 May, aged 74.

Mr. Barr was a partner in the firm of E. A. Stone and Partners for about fifteen years, and during that period shared in the responsibility for the construction of the Piccadilly Theatre, the London Casino, the Whitehall and a number of Astoria cinemas. He personally designed the Duchess Theatre.

David William Ditchburn [*F*], past President of the Indian Institute of Architects and past Chairman of the R.I.B.A. Examinations Board in India, died on 9 May at the age of 70.

Mr. Ditchburn, who was born in Dunfermline, Fife, went to Bombay shortly after the first world war. He became President of the Bombay Architectural Association in 1924 and was instrumental in the formation of the Indian Institute of Architects, of which he was President from 1930 to 1932. He was Chairman of the R.I.B.A. Examinations Board in India from its inception in 1929 for over twenty years.

The list of Mr. Ditchburn's architectural works is a long one, including mills and factories—notably the great wheat silos of the Wallace flour mills and the layout of the extensive salt works at Aden—places of worship, church schools, cinemas, office buildings—including the addition of an upper floor to the Times of India Building—a palace at Dharampur, and hospitals for the Salvation Army. In addition he had a high reputation as an arbitrator. In England Mr. Ditchburn had been for a time in the Architectural Department of the London County Council and was responsible for a technical survey of a section of the London Underground Railway. During the first world war he served in London and was attached to the Royal Flying Corps.

He was a keen yachtsman and an eminent Freemason. At the time of his death he held the ranks of Past Deputy Grand Master of United Scottish Freemasonry in India and Pakistan, Past Deputy Grand Superintendent of Grand Chapter and Inspector General of the Ancient and Accepted Scottish Rite in India, Past District Grand Warden in the District Grand Lodge of Bombay, Honorary Grand Deacon in the Grand Lodge of Scotland, and was a founder member of two Lodges in the English Constitution.

A large gathering of both Indian and European friends attended his funeral in Bombay, and the Indian Institute of Architects held a Special Condolence Meeting on 19 May at which various members paid tribute to him.

Francis James Watson-Hart [*Retd. F*] died on 20 July, aged 73.

Mr. Watson-Hart studied at the Royal Academy Schools—whose Bronze Medal he won in 1906—and under the late John Belcher, R.A., President of the R.I.B.A. 1904–6. He was in partnership with Mr. G. Val Myer from 1928 until the outbreak of war, and together they built Broadcasting House, London; also Fountain House and Aldford House, Park Lane; Russell Court, Woburn Place; Halifax House in the Strand and Kendalwick House, Cannon Street; Mr. Arthur W. Willis [*L*], who had joined them as an assistant some years previously, became a partner in 1946 and now carries on the practice.

Mr. Val Myer writes of his old friend and partner as follows:

'This architect . . . was the son of a Nottingham painter of some considerable local distinction. Frank served his articles with a Mr. Bright of Nottingham who took off quantities and collected rents and generally kept young Hart extremely busy in the daytime. Frank's real art and architectural education were derived from the Nottingham School of Art, which has the credit of producing many of the greatest painters of our time, including Arnesby Brown and Dame Laura Knight. On completion of his articles young Hart came to London to work as an improver in the office of John Belcher, R.A. At the time of his arrival in Belcher's office I was a fresh green pupil and as his junior by three years learned more of architecture from Frank than from any other source. Early in 1902 we went to Italy together for a few months of delightful study and for more than 50 years I am proud to say we remained upon terms of intimate friendship.

'Between the Belcher days and the beginning of our professional partnership Frank designed

and carried out a number of modest but charming houses, but his principal interest was in developing a black and white technique of exceptional character and charm for perspective drawings for other architects who keenly appreciated his work. During the first world war he did good service with the Office of Works in supervising the construction of various munition factories.

'Throughout his career Frank's second major interest was the stage. He was largely influential in building up the Hampstead Amateur Dramatic Society and for many years it was rare for his name not to appear in the caste of their productions. His subtle gift of humour made him a gifted comedian and he was many times offered the opportunity of turning professional. In addition he designed and either painted or supervised practically all the scenery for the club.'

Mr. Val Myer concludes: 'At the risk of being thought fulsome and sentimental I will say once more that Frank Watson-Hart was not only my life's greatest friend but was the highest-minded and best-loved person I have ever known.'

Frank Reginald Gould Wills [*Retd. F*] died on 3 March 1953, of a heart attack. He was 87. Mr. Wills' last years were saddened by the loss of his sight, which caused his retirement in 1941.

Born in Exeter, he left school at 15 and was articled to a Mr. Charles Pinn, architect, of that city, meanwhile attending the Exeter School of Art. Thereafter he spent varying periods as assistant in architects' offices, and was for a time with the Admiralty, working on the design of generating stations at H.M. dockyards when electricity was first installed at dockyards throughout England. In 1892 Mr. Wills qualified and was elected an Associate of the Institute. From 1903 onwards he taught building subjects at evening classes, first at West Ham Technical College, later at Woolwich Polytechnic.

About 1908 Mr. Wills went into practice on his own account. On the outbreak of the first world war he returned to the Admiralty, subsequently moving to the Office of Works, working on the lay-out of anti-aircraft and searchlight sites for the London area. After the war he returned to private practice of a general character. On the outbreak of the second world war his practice largely came to an end, and for a short while he held an appointment with a firm of electrical lighting engineers, working on schemes for indirect electric lighting. When this too came to an end he went, after a period of unemployment, to South Wales on the staff of British Industrial Solvents Ltd., redesigning in brick and concrete buildings originally intended to be in steel, and designing offices, laboratory, workshops, canteen, etc. It was while working in this post that Mr. Wills lost his sight.

Mr. Wills was the author of *Building Construction, Graphic Statics and Isometric Drawings*—a book for first year students—and of the *Admiralty Diary of Notes in Electric Lighting and Power Stations*. A volume of his lectures to students at West Ham Technical College was also published.

Basil Maxwell Peake [*A*] met his death in a yachting accident at the beginning of September. He was aged 34.

Mr. Peake was educated at Bembridge School, Isle of Wight, and trained at the Architectural Association School of Architecture, interrupting his career there for war service. He served in the Airfield Construction Service of the R.A.F. with the rank of Flying Officer. He was elected an Associate of the Institute in 1947. Mr. Peake had been an assistant in the offices of T. P. Bennett & Son [*F*], de Metz & Birks [*F*], Michael Pattrick [*A*] and, for the past two years, Richard Sheppard & Partners [*F*].

Cyril Robins Crumpton [*L*] died at St. Matthew's Nursing Home, Northampton, on 10 August 1953, aged 62.

Known to all his friends as 'Dick', he received his early training in the offices of A. E. Lambert, Nottingham, afterwards joining the staff of Messrs. Gotch & Saunders, of Kettering, where he remained as a senior assistant until 1933, when he became chief assistant to Talbot Brown & Fisher of 'Burysteed', Wellingborough. In 1947 he was taken into partnership by Paul J. J. Panter [*F*], together with the latter's eldest son, P. J. H. Panter [*A*], under the title of Talbot Brown, Panter & Partners. He gained a wide experience of almost all types of work and worked as assistant to the late J. A. Gotch on the Head Offices of the Midland Bank. He was a Past President of the Wellingborough Branch of Rotary International and at the time of his death was a member of the Executive Committee, Northants Branch of the Northants, Beds and Hunts Association of Architects.

Although for a number of years he was aware that his health would not allow him to over-exert himself, he was extremely active and cheerful and to those who knew him he was a valued friend whose loss is greatly felt.

P. J. J. PANTER [*F*]

Erich Mendelsohn, a former Fellow, died recently in San Francisco, aged 66.

He was born in East Prussia in 1887, the son of a German Jewish merchant. He first entered Munich University to study economics, but after a year transferred to the Berlin Technische Hochschule, and two years later to the Munich Technische Hochschule, to study architecture, qualifying in 1912.

He served throughout the first world war and set up practice immediately on its conclusion. He was in the forefront of the move towards a typical 20th century architecture, making much use of steel, glass and ferro-concrete, and being much interested in the social implications of architecture today. Throughout the years between the wars he erected buildings in various countries and won an international reputation. In 1933 he left Germany and settled in England, entering into partnership with Professor Serge Chermayeff [*F*]. He was naturalised in 1938, and elected a Fellow of the Institute in 1939, but subsequently went to America. In 1947 he resigned from membership of the Institute, having decided to remain permanently in the U.S.A.

In this country Mr. Mendelsohn's outstanding work is the De la Warr Pavilion at Bexhill—the result of his being placed first in a competition. In Germany his first important work was the Einstein Tower at Potsdam, an astro-physical laboratory and observatory designed to further Professor Einstein's researches, and he was also responsible for a number of large stores, cinemas, houses and town planning projects. He did a considerable amount of work in Palestine, designing a power station and the government hospital at Haifa and the University medical building at Mount Scopus, Jerusalem.

Frederick White [*F*] died on 28 April 1953, aged 75.

The son of the late Sir Edward White, J.P., one time Chairman of the L.C.C., Frederick White was born in the borough of St. Marylebone, and was educated at Bedford Public School and the Regent Street Polytechnic. He was for some time with the firm of Saxon Snell [*F*], during which time he assisted in the design of Charing Cross Hospital, Lock Hospital, London, and others, but in recent years he had his own practice at Cumberland Mansions, London, W.1. He was advisory architect to the White City Exhibition 1909–15 and to the amusement section at the Ghent Exhibition in 1913. In the first world war he served as Lieutenant Assistant Adjutant of the 21st Battalion County of London Volunteer Regiment 1914–19, and was Production Officer to the Air Ministry 1916 to 1919. He served throughout the second world war as an A.R.P. Warden and also worked for the Ministry of Works on repairs.

Mr. White was prominent in public work. He was elected to St. Marylebone Borough Council, Ward 5, in 1917, and was Mayor 1931–2, and was active on a large number of local government committees.

Stanley James Hands [*A*], County Architect for Huntingdonshire, met his death on 19 August while rescuing two boys who got into difficulties while bathing at Blakeney Point, Norfolk. Mr. Hands brought the first boy ashore successfully but was drowned in helping the second. He was 45 years of age.

Mr. Hands was articled to his uncle, Mr. H. Ireton Hands [*L*], in January 1926. After completing his articles he was for a time an assistant in the office of Mr. Holland W. Hobbis [*F*], in Birmingham, then went to the County Architect's Department, Huntingdonshire, in 1934. He became County Architect in 1949. As such he was responsible for a number of schools, including primary, secondary modern and special; welfare establishments, including old people's homes and clinics; police buildings and county administrative buildings.

Mr. T. H. Longstaff, M.I.C.E., M.T.P.I. [*F*], County Surveyor and Planning Officer, Huntingdonshire, writes as follows:

'I have been associated with Mr. Hands for 19 years and for 15 of those years Mr. Hands worked with me, first as architectural assistant and later as Assistant County Architect, until 1949, when he relieved me of the position of County Architect. During this long association I was in a position to appreciate to the full the sterling qualities of Mr. Hands, not only for his technical skill and ability, in which I had complete confidence, but also for his absolutely fearless honesty and integrity, combined with an exceptional degree of modesty and sincerity of approach.'

Mr. J. A. Wardley, Hon. Secretary, Huntingdonshire Branch of the Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects, writes: '. . . . Such heroism should not go unnoticed, although he himself would have deprecated the publicity, for he was an unassuming man, of retiring and kindly disposition, always gentlemanly in his bearing. Although he was not a member of our Allied Society, his membership of the Plymouth Brethren precluding such participation, he was, nevertheless, a brother architect of whom we feel we can be justly proud, and in mourning his loss we take comfort, as his sorrowing relatives must, from the nobility of his conduct.'

Wallace Wood [*Retd. F*] died on 5 September 1953, aged 70.

Mr. Wood, who trained with Messrs. Wood & Kendrick of West Bromwich, became Chief Architect to the Wolverhampton Corporation, holding that post from 1920 to 1946. His work in this capacity included the planning and development of several large housing estates, numerous schools, a swimming bath and library.

Mr. Wood served throughout the first world war, joining as a private and attaining the rank of Captain.

Henry Frederick Butcher [*A*] died on 28 December 1952, aged 52. Mr. Butcher, who was a New Zealander, served in the first world war, was badly gassed and taken to hospital in England. On recovery he entered London University and read architecture. After a short period in a London architect's office he went to America and, after a few years there, back to New Zealand. There he was appointed Town Planner to the city of Wellington, which office he held for a number of years. During the recent war he joined the Ministry of Works of New Zealand, later being made responsible for all hospital design. This latter post he held until his death. The most known and admired of his works is the Wellington dental clinic.

Members' Column

This column is reserved for notices of changes of address, partnership and partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. Kenneth Chilcott [*A*] has been appointed Architect, P.W.D., Gambia, West Africa.

Mr. R. H. H. Davis, B.Arch. (Lvpl.) [*A*], has resigned from his appointment as Senior Architect to the Peterlee Development Corporation and has taken up the appointment of Senior Architect, The Housing Trust, Kuala Lumpur, Federation of Malaya.

Mr. F. O. Hayes [*A*], formerly Deputy Borough Architect, Swansea, has been appointed Borough Architect, Camberwell, Town Hall, Camberwell, London, S.E.5 (RODney 2081).

Mr. Sydney Litherland, A.M.T.P.I. [*A*], has relinquished his appointment with the Salisbury City Council, S. Rhodesia, and has been appointed an Assistant Town Planning Officer to the S. Rhodesian Government, P.O. Box 56, Causeway, Salisbury, S. Rhodesia.

Mr. Walter Smith [*A*] has transferred from Admiralty Service to an appointment as Architect and Buildings Superintendent to the Public Works Department, P.O. Box 58, Mbabane, Swaziland, and will be pleased to receive trade data, catalogues, etc., at that address.

Mr. A. G. Sutton, B.A. (Manchester) [*A*], has taken up an appointment with British Railways, North Eastern Region, York.

PRACTICES AND PARTNERSHIPS

Mr. G. L. Cadell [*A*] has taken into partnership **Mr. C. R. Vass** [*A*]. The practice will continue under the style of **Cadell and Vass** from 9 Pembridge Place, London, W.2.

Mr. C. K. Capon [*A*], **Mr. P. L. Cocke** [*A*], **Mr. M. H. Cooke-Yarborough** [*A*], **Mr. A. W. Cox** [*A*], **Mr. L. M. De Syllas** [*A*] and **Mr. J. M. Grice** [*A*], previously practising as Architects' Co-operative Partnership at 34 Gordon Square, London, W.C.1, have moved their office to 44 Charlotte Street, London, W.1 (LANgham 5791), and are now practising under the style of **Architects' Co-Partnership.**

Mr. Donald M. Corder [*A*] has opened an office at 'Avondale,' Branksome Avenue, Stanford-le-Hope, Essex, where he will be pleased to receive trade catalogues, etc.

The practice of the late Dr. Reginald Fairlie and Partners, 7 Ainslie Place, Edinburgh, is being carried on under the style of **Messrs. Reginald Fairlie and Partners** at the same address, the partners being **Mr. Charles Gray** [*L*] and **Mr. A. R. Conlon.**

Messrs. Geo. H. Gray and Partners [*F*/*A*] announce that **Mr. C. P. Wakefield-Brand,** M.B.E. [*A*], has retired from the partnership. **Mr. J. Gray** [*A*], who has been Senior Assistant for some years, is joining as a partner, and the practice will be carried on as before from 16 Great North Road, Newcastle upon Tyne, 2, and 52 Camden Street, North Shields.

Mr. C. V. Harborne [*L*] and **Mr. D. E. Grove** [*A*] have entered into partnership and will practise from 218 Witton Lane, Witton, Birmingham, 6.

Mr. Alan J. Large [*A*] has commenced in private practice at 5 New Market Street, Ulverston, Lancs., where he will be pleased to receive trade catalogues, etc.

Mr. John Nowell Parr [*F*] has taken into partnership **Mr. R. P. Shannon** [*A*]. The practice will continue under the style of **Nowell Parr and Son** from 97 Old Brompton Road, London, S.W.7 (KENsington 9266 and 8871/2).

Mr. Dennis E. Wilburn [*A*] has opened a practice at 12 Albion Place, Doncaster, and will be pleased to receive trade catalogues, etc.

CHANGES OF ADDRESS

Mr. Anthony Avenell [*A*] of 15 Littledown Avenue, Queens Park, Bournemouth (Boscombe 34940), has moved his office to Ellerslie Chambers, Hinton Road, Bournemouth (Bournemouth 5110).

Mr. Lawrence Dale [*F*] has removed his office to 4 Bradmore Road, Oxford (Oxford 57235).

The new address of **Mr. Eric Defty,** Dip.Arch. (Dunelm) [*A*], is c/o The Graduate School of Design, Harvard University, Cambridge, Massachusetts, U.S.A.

The new address of **Mr. C. Featherstone** [*A*], consequent on his resigning his post with the Harlow Development Corporation and joining the firm of Sir John Brown, A. E. Henson and Partners, is 30 Billing Road, Northampton (Northampton 3311).

Mr. Leslie Gooday [*A*] has changed his private address to 36 West Temple Sheen, East Sheen, London, S.W.14.

Messrs. Leslie Gooday and Wycliffe Noble [*AA*] have changed their address to 2 Cadogan Place, London, S.W.1, and will be pleased to receive trade catalogues, etc.

Messrs. Hasker and Hall (Mr. F. Leslie Hasker and Mr. Ruthven O. Hall [*A*]) have removed from 55 Queen Anne Street, London, W.1, to 13 Welbeck Street, London, W.1 (WELbeck 0061/2).

Messrs. Huckle and Durkin [*F*] have removed to 30 Queen Anne Street, London, W.1 (LANgham 4091/3).

Mr. Bronek Katz and **Mr. R. Vaughan** [*A*] have moved from Norfolk Crescent to new offices at 17 Great Cumberland Place, London, W.1. The telephone numbers AMBassador 3740 and 1553 remain unchanged.

Mr. Bernard Kaukas [*A*] has removed from 18a Abbey Orchard Street, Westminster, S.W.1, to 427a Kingsbury Road, London, N.W.9.

Mr. T. F. Lawson, A.R.I.C.S. [*A*], has removed his office to Norwich Union Chambers, Clarence Street, Gloucester. The telephone number Gloucester 23673 is not changed.

Mr. G. Clayton Smith, Dip.Arch. (Leeds) [*A*], has moved his office to Primrose House, High Street, Newmarket, where he will be pleased to receive trade catalogues, etc.

Mr. and Mrs. Peter Smithson [*AA*] have removed to 46 Limerston Street, Chelsea, S.W.10 (FLAxman 7329).

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

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Associate, 48, experienced, suitable personality, some financial resources, requires partnership in Tunbridge Wells or neighbourhood. Box 76, c/o Secretary, R.I.B.A.

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Licentiate (39) seeks partnership or would take over practice by arrangement, in London or Home Counties. Wide experience, including considerable industrial work. Some capital available. Box 79, c/o Secretary, R.I.B.A.

Associate with very varied experience seeks partnership. Some capital available. Box 80, c/o Secretary, R.I.B.A.

Fellow, north-east area, with widespread practice, requires Associate (30 to 40) as junior partner, or senior assistant with view to partnership. Box 81, c/o Secretary, R.I.B.A.

Fellow (49) with very wide experience in all classes of work seeks partnership in London or district. Some capital available. Box 82, c/o Secretary, R.I.B.A.

Partnership available in small, good class west end of London practice. Personality and technical experience essential. Box 83, c/o Secretary, R.I.B.A.

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